# APPENDICES

Appendix A	
This appendix section shall	l contain DWR related documents
Appendix A-1 DV	WR Recommended Tables3
Appendix A-2 DV	WR Checklist15
Appendix B	
This appendix section shall	l contain all agency related documents
Appendix B-1 Re	esolution Adopting the 2010 UWMP23
Appendix B-2 Co	opies of Notice Publications27
Appendix B-3 Co	opies of Notification Letters Sent29
Appendix B-4 Wa	ater Shortage Contingency Plan35
Appendix B-5 CU	UWCC Report205
Appendix C	
This appendix section shall	l contain demand calculation related materials
Appendix C-1 M	WELO Summary249
Appendix C-2 Ca	alGREEN Building Code253
Appendix C-3 Ca	alculation Methods255
Appendix C-4 CU	UWCC263
Appendix C-5 Ba	aseline Method 4267
Appendix D	
This appendix section shall	l contain supply related documents
Appendix D-1 Wa	ater Rights Licenses271
Appendix D-2 PC	G&E Contracts309
Appendix D-3 W	estern Placer County Groundwater Management Plan365

Appendix D-4 Martis Valley Groundwater Management Plan ......511

THIS PAG	E INTENT	TIONALLY	Y LEFT BLAN	NK
THIS PAG	E INTENT	TIONALLY	LEFT BLA	NK
THIS PAG	E INTENT	TIONALLY	LEFT BLA	NK
THIS PAG	E INTENT	TIONALLY	LEFT BLA	NK
THIS PAG	E INTENT	TIONALLY	LEFT BLAN	NK

Appendix A-1 DWR Rec	commended Tables	

Table 1 Coordination with appropriate agencies										
Coordinating Agencies 1,2	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not involved / No information			
Placer County						Х				
City of Roseville	X					Χ				
City of Rocklin					X	X				
City of Lincoln	X					Χ				
City of Auburn						X				
City of Colfax						Χ				
Town of Loomis						X				
San Juan Water District						Χ				
California American Water District						Χ				
Nevada Irrigation District						Χ				
Sacramento Suburban Water District		X				Х				
Truckee Donner Public Utility District		X			X	Χ				
Folsom Lake Mutual Water Co.						Χ				
Golden Hills Mutual Water Co.						Χ				
Hidden Valley Community Association						Χ				
Lakeview Hills Community Association						Χ				
Willo-Glen Water Co.						Χ				
Christian Valley Park CSD						Χ				
Alpine Meadows Water Association						Χ				
<b>Dutch Flat Mutual Water Association</b>						Χ				
Heater Glen CSD						Χ				
Meadow Vista County Water District						Х				
Weimar Water Co.						Х				
Public			Х			Х				

<sup>1</sup> Indicate the specific name of the agency with which coordination or outreach occurred.

<sup>2</sup> Check at least one box in each row.

Table 2 Population — current and projected									
	2010	2015	2020	2025	2030	2035 - optional	Data source <sup>2</sup>		
Service area population <sup>1</sup>	101,938	114,434	126,930	139,427	151,923	164,420	2000 Census, Connection Data, and Projected Development		

<sup>1</sup> Service area population is defined as the population served by the distribution system. See Technical Methodology 2: Service Area Population (2010 UWMP Guidebook, Section M). 2 Provide the source of the population data provided.

Table 3 Water deliveries — actual, 2005										
			2005							
	Met	ered	Not me	etered	Total					
Water use sectors*	# of accounts	Volume	# of accounts	Volume	Volume					
Single family	27,761	15,639	0	0	15,639					
Multi-family	728	1,929	0	0	1,929					
Commercial	1,599	3240	0	0	3,240					
Industrial	2	1015	0	0	1,015					
Institutional/governmental	151	967	0	0	967					
Landscape	399	1350	0	0	1,350					
Agriculture	0	0	0	0	0					
Other	832	703	0	0	703					
Total	31,472	24,843	0	0	24,843					
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							
*ONLY residential is reported as accounts. Others are reported	d in ACRES									

Table 4 Water deliveries — actual, 2010										
			2010							
	Met	ered	Not m	etered	Total					
Water use sectors*	# of accounts	Volume	# of accounts	Volume	Volume					
Single family	29,625	16,154			16,154					
Multi-family	8,408	2,029			2,029					
Commercial	1,838	3213			3,213					
Industrial	1	415			415					
Institutional/governmental	169	1209			1,209					
Landscape	485	1929	28	11967	13,896					
Agriculture	618	24869	3,070	55301	80,170					
Other	n/a	11,591	n/a	3,583	15,174					
Total	41,144	61,409	3,098	70,851	132,260					
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							
*ONLY residential is reported as accounts. Others are reported	d in ACRES									

Table 5 Water deliveries — projected, 2015										
	Mot	ered	2015 Not m	atarad	Total					
Water use sectors*	# of accounts	Volume	# of accounts	Volume	Volume					
Single family	15,296	10,757	0	0	10,757					
Multi-family	26,870	10,660	0	0	10,660					
Commercial	1,601	3,469	0	0	3,469					
Industrial	1,157	2,751	0	0	2,751					
Institutional/governmental	460	1,349	0	0	1,349					
Landscape	5	25	0	0	25					
Agriculture	0	0	0	0	0					
Other	0	0	0	0	0					
Total	45,389	29,012	0	0	29,012					
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							
*ONLY residential is reported as accounts. Others are reported	d in ACRES									

Table 6 Water deliveries — projected, 2020										
			2020							
	Met	tered	Not m	etered	Total					
Water use sectors*	# of accounts	Volume	# of accounts	Volume	Volume					
Single family	16,971	11,329	0	0	11,329					
Multi-family	29,956	11,150	0	0	11,150					
Commercial	1,717	3,631	0	0	3,631					
Industrial	1,372	3,172	0	0	3,172					
Institutional/governmental	522	1,491	0	0	1,491					
Landscape	6	26	0	0	26					
Agriculture	0	0	0	0	0					
Other	0	0	0	0	0					
Total	50,544	30,799	0	0	30,799					
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							
*ONLY residential is reported as accounts. Others are reported	in ACRES	<u> </u>	•							

Table 7 Water deliveries — projected 2025, 2030, and 2035										
	20	)25	20:	30	2035 - c	ptional				
	met	ered	mete	ered	mete	ered				
Water use sectors*	# of accounts	Volume	# of accounts	Volume	# of accounts	Volume				
Single family	18,646	12,058	20,322	12,786	21,997	13,783				
Multi-family	33,042	11,724	36,127	12,298	39,213	13,224				
Commercial	1,834	3,799	1,951	3,966	2,051	4,171				
Industrial	1,588	3,596	1,803	4,020	2,018	4,498				
Institutional/governmental	584	1,632	645	1,774	707	1,945				
Landscape	6	27	6	29	6	30				
Agriculture	0	0	0	0	0	0				
Other	0	0	0	0	0	0				
Total	55,699	32,836	60,854	34,873	65,993	37,651				
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							
*ONLY residential is reported as accounts. Others are reported	in ACRES									

Table 8									
Lo	w-income projected	water demands							
Low Income Water Demands <sup>1</sup>	2015	2020	2025	2030	2035 - opt				
Single-family residential	3,569	3,857	4,126	4,374	4,615				
Multi-family residential	1,066	1,152	1,232	1,307	1,379				
Total	4,635	5,010	5,358	5,681	5,994				
Units (circle one): acre-feet per year	million gallons per year	cubic feet per year							
1Provide demands either as directly estimated values or as a percent of demand.	-								

	Table 9								
Sales to other water agencies									
Water distributed	2005	2010	2015	2020	2025	2030	2035 - opt		
Cal American Water Co.	608	1,010	985	960	936	912	912		
Sacramento Suburban Water District	14358	14,000	29,000	29,000	29,000	29,000	29,000		
City of Roseville	2342	9,600	10,000	20,000	30,000	30,000	30,000		
San Juan Water District	12286	11,800	18,967	19,652	20,370	20,411	21,941		
City of Lincoln	8197	9,327	15,205	19,667	24,129	28,592	30,395		
Folsom Lake Mutual Water Co.	144	150	150	150	150	150	150		
Golden Hills Mutual Water Co.	28	29	29	29	29	29	29		
Hidden Valley Community Association	76	70	70	70	70	70	70		
Lakeview Hills Community Association	63	59	59	59	59	59	59		
Willo-Glen Water Co.	9	9	9	9	9	9	9		
Christian Valley Park CSD	20.87	21	21	21	21	21	21		
Alpine Meadows Water Association	117	117	117	117	117	117	117		
Dutch Flat Mutual Water Association	1.87	2	2	2	2	2	2		
Heater Glen CSD	32	32	32	32	32	32	32		
Meadow Vista County Water District	56	55	55	55	55	55	55		
Weimar Water Co.	365	366	366	366	366	366	366		
Total	38,704	46,646	75,066	90,188	105,344	109,824	113,156		
Units (circle one): acre-feet per year	million gallons per year	cubic feet per year							

Table 10									
Additional water uses and losses									
Water use <sup>1</sup>	2005	2010	2015	2020	2025	2030	2035 -opt		
Saline barriers	0	0	0	0	0	0	0		
Groundwater recharge	0	0	0	0	0	0	0		
Conjunctive use	0	0	0	0	0	0	0		
Raw water	74959	92,141	73,467	71,912	70,357	68,802	67,232		
Recycled water	0	272	2,443	2,443	2,443	2,443	2,443		
System losses	5822	3,022	2,902	2,771	2,899	3,000	3,200		
Other (define)	0	0	0	0	0	0	0		
Total	80,781	95,435	78,811	77,125	75,698	74,244	72,874		
Units (circle one): acre-feet per year	million gallons per year	cubic feet per year							
1Any water accounted for in Tables 3 through 7 are not included in this table.									

Data from 2005 UWMP

			Table 11					
			Total water	use				
Water Use		2005	2010	2015	2020	2025	2030	2035 - opt
Total water deliveries (from Tables 3 to 7)		24,843	132,260	29,012	30,799	32,836	34,873	37,651
Sales to other water agencies (from Table 9)		38,704	46,646	75,066	90,188	105,344	109,824	113,156
Additional water uses and losses (from Table 10)		80,781	95,435	78,811	77,125	75,698	74,244	72,874
	Total	144,328	274,341	182,889	198,112	213,878	218,941	223,680
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year					

Table 12  Retail agency demand projections provided to wholesale suppliers									
Wholesaler	Contracted Volume <sup>3</sup>	2010	2015	2020	2025	2030	2035 -opt		
Zone 1									
PG&E Zone 1	100,400	100,400	100,400	100,400	100,400	100,400	100,400		
Central Valley Project	35,000	35,000	35,000	35,000	35,000	35,000	35,000		
Zone 3									
PG&E Zone 3	25,000	25,000	25,000	25,000	25,000	25,000	25,000		
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year						

	Table 13 Base period ranges		
Base	Parameter	Value	Units
	2008 total water deliveries	31,336	see below
	2008 total volume of delivered recycled water	0	see below
10. to 45 combines model	2008 recycled water as a percent of total deliveries	0%	percent
10- to 15-year base period	Number of years in base period <sup>1</sup>	10	years
	Year beginning base period range	1995	
	Year ending base period range <sup>2</sup>	2004	
	Number of years in base period	5	years
5-year base period	Year beginning base period range	2005	
	Year ending base period range <sup>3</sup>	2009	
Units (circle one):	acre-feet per year million gallons per year cubic feet per year	•	

1f the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a continuous 10- to 15-year period.

2The ending year must be between December 31, 2004 and December 31, 2010.

2The ending year must be between December 31, 2007 and December 31, 2010.

Base	Table 14 Base daily per capita water use — 10- to 15-year range								
Base period year	Base period year		Daily system gross water use (mgd)	Annual daily per capita water use					
Sequence Year	Calendar Year	Population		(gpcd)					
Year 1	1995	60,000	17	283					
Year 2	1996	61,800	18	285					
Year 3	1997	63,800	21	321					
Year 4	1998	65,500	18	270					
Year 5	1999	69,000	21	311					
Year 6	2000	73,650	23	315					
Year 7	2001	78,294	24	306					
Year 8	2002	83,632	25	299					
Year 9	2003	87,941	25	283					
Year 10	2004	91,116	28	303					
	298								
1Add the values in the column and divide by the number	ber of rows.								

Table 15 Base daily per capita water use — 5-year range								
Base period year		Distribution System	, ,	Annual daily per capita water use				
Sequence Year	Calendar Year	Population	water use (mgd)	(gpcd)				
Year 1	2005	92,770	25	266				
Year 2	2006	95,442	25	262				
Year 3	2007	96,909	26	270				
Year 4	2008	97,444	28	287				
Year 5	2009	97,887	26	261				
Base Daily Per Capita Water Use <sup>1</sup> 269								
1Add the values in the column and divide by the numbe	r of rows.							

Table 16 Water supplies — current and projected									
Water Supply Sources 2010 2015 2020 2025 2030 2035 - opt									
Water purchased from <sup>1</sup> :	Wholesaler supplied volume (yes/no)						·		
PG&E Zone 1	yes	100,400	100,400	100,400	100,400	100,400	100,400		
PG&E Zone 3	yes	25,000	25,000	25,000	25,000	25,000	25,000		
Central Valley Project	yes	0	0	35,000	35,000	35,000	35,000		
Supplier-produced groundwater <sup>2</sup>		172	306	439	573	707	800		
Supplier-produced surface water		123,400	123,400	123,400	123,400	123,400	123,400		
Transfers in		0	0	0	0	0	0		
Exchanges In		0	0	0	0	0	0		
Recycled Water		0	2,443	4,885	5,936	6,987	8,038		
Desalinated Water		0	0	0	0	0	0		
	Total	248,972	251,548	289,124	290,309	291,494	292,638		

Units (circle one): acre-feet per year million gallons per year cubic feet per year

1 Volumes shown here should be what was purchased in 2010 and what is anticipated to be purchased in the future. If these numbers differ from what is contracted, show the contracted quantities in Table 17.

2 Volumes shown here should be consistent with Tables 17 and 18.

Table 17 Wholesale supplies — existing and planned sources of water								
Wholesale sources <sup>1,2</sup> Contracted Volume <sup>3</sup> 2015 2020 2025 2030 2035 - opt								
PG&E Zone 1	100,400	100,400	100,400	100,400	100,400	100,400		
PG&E Zone 3	25,000	25,000	25,000	25,000	25,000	25,000		
Central Valley Project	35,000	0	35,000	35,000	35,000	35,000		
Units (circle one):	acre-feet ner vear	million gallons per vear	cubic feet ner vear					

1Water volumes presented here should be accounted for in Table 16.

2If the water supplier is a wholesaler, indicate all customers (excluding individual retail customers) to which water is sold. If the water supplier is a retailer, indicate each wholesale supplier, if more than one.

3Indicate the full amount of water

Table 18							
		Groundwater — vol	lume pumped				
Basin name(s)	Metered or Unmetered <sup>1</sup>	2006	2007	2008	2009	2010	
Martis Valley	Metered	73	79	160	141	133	
Sacramento Valley	Metered	0	0	0	0	0	
Total g	roundwater pumped	73	79	160	141	133	
Groundwater as a percent	of total water supply	0.029%	0.032%	0.064%	0.057%	0.054%	
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year				
1Indicate whether volume is based on volumetric meter data or	another method	-					

Table 19								
Groundwater — volume projected to be pumped								
Basin name(s)	2015	2020	2025	2030	2035 - opt			
Martis Valley	512	1,062	1,062	1,062	1,062			
Sacramento Valley	0	0	0	0	0			
Total groundwater pumped	512	1,062	1,062	1,062	1,062			
Percent of total water supply	0.20%	0.37%	0.37%	0.36%	0.36%			
Inits (circle one):	acre-feet per year	million gallons per year	cubic feet per year					
Community Buildout expected by 2015 in 2005 UWMP, using 20	005 UWMP data temporari	ly, should be updated with r	new estimates as 2009 use v	was only 275 AF				

Table 20 Transfer and exchange opportunities							
Transfer agency	Transfer or exchange	Short term or long term	Proposed Volume				
Any associated with the Water Forum	Transfer	Short Term (Dry Year)	MAX 47,000				
Total			MAX 47,000				
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year				

	Table 21							
	Recycled water — wastewater collection and treatment							
Type of Wastewater		2005	2010	2015	2020	2025	2030	2035 - opt
Wastewater collected & treated in service area		12,000	12,606	13,260	13,926	14,790	15,660	16,888
Volume that meets recycled water standard		12,000	12,606	13,260	13,926	14,790	15,660	16,888
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year					

Table 22									
Recycled water — non-recycled wastewater disposal									
Method of disposal	2010	2015	2020	2025	2030	2035 - opt			
Discharge to Creeks	eeks Tertiary		10,931	8,681	4,767	4,580	4,399	4,576	
	10,931	8,681	4,767	4,580	4,399	4,576			
Units (circle one):	acre-feet per vear	million gallons per vear	cubic feet per vear						

	Table 23 Recycled water — potential future use									
User type	Description	Feasibility <sup>1</sup>	2015	2020	2025	2030	2035 - opt			
Agricultural irrigation		-	0	0	0	0	0			
Landscape irrigation <sup>2</sup>	Tertiary	Already Underway	938	1,877	2,492	3,106	3,721			
Commercial irrigation <sup>3</sup>	Tertiary	Plan In Place	436	872	1,309	1,745	2,181			
Golf course irrigation			0	0	0	0	0			
Wildlife habitat			0	0	0	0	0			
Wetlands			0	0	0	0	0			
Industrial reuse	Tertiary	Plan In Place	1,068	2,136	2,136	2,136	2,136			
Groundwater recharge			0	0	0	0	0			
Seawater barrier			0	0	0	0	0			
Geothermal/Energy			0	0	0	0	0			
Indirect potable reuse			0	0	0	0	0			
Other (user type)			0	0	0	0	0			
Other (user type)			0	0	0	0	0			
	Total		2,443	4,885	5,936	6,987	8,038			

Units (circle one):

acre-feet per year

million gallons per year cubic feet per year

1Technical and economic feasibility.

2Includes parks, schools, cemeteries, churches, residential, or other public facilities) toilets, HVAC, etc) and commercial uses (car washes,

Table 24 Recycled water — 2005 UWMP use projection compared to 2010 actual							
Use type	2010 ac	tual use	2005 Projection for 2010 <sup>1</sup>				
Agricultural irrigation	(	)	0				
Landscape irrigation <sup>2</sup>	27	72	756				
Commercial irrigation <sup>3</sup>	(	)	0				
Golf course irrigation	(	)	0				
Wildlife habitat	(	)	0				
Wetlands	(	)	0				
Industrial reuse	(	)	0				
Groundwater recharge	(	)	0				
Seawater barrier	(	)	0				
Geothermal/Energy	(	)	0				
Indirect potable reuse	(	)	0				
Other (user type)	1	0	0				
Other (user type)	(	0	0				
Total	l 27	72	756				
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year				

1From the 2005 UWMP. There has been some modification of use types. Data from the 2005 UWMP can be left in the existing categories or modified to the new categories, at the discretion of the water supplier.

2Includes parks, schools, cemeteries, churches, residential, or other public facilities)

3Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries, nurseries, etc)

Table 25 Methods to encourage recycled water use									
Projected Results									
Actions			2010	2015	2020	2025	2030	2035 - opt	
Financial incentives			0	0	0	0	0	0	
Water Quality			0	0	0	0	0	0	
Supply Reliability			765	2,443	4,885	5,936	6,987	8,038	
Total			765	2,443	4,885	5,936	6,987	8,038	
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year						

	Table 26 Future water supply projects									
Project name <sup>1</sup> Projected start date Projected completion date Projected start date Projected start date Projected completion date Projected start date Projected start date Projected completion date Projected start date Projected start date Projected completion date Projected start date Projected start date Projected completion date Projected start date Projected										
American River Water Supply Projects	In Progress	2007-2009	None	35,500	35,500	35,500	35,500	35,500		
Sacramento River Water Supply Projects	N/A	N/A	Stopped	N/A	N/A	N/A	N/A	N/A		
Total				35,500	35,500	35,500	35,500	35,500		
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year							

1Water volumes presented here should be accounted for in Table 16.

2Indicate whether project is likely to happen and what constraints, if any, exist for project implementation.

3Provide estimated supply benefits, if available.

Table 27							
Basis of water year data							
Water Year Type Base Year(s)							
Average Water Year	1999-2008						
Single-Dry Water Year	1976-1977						
Multiple-Dry Water Years	1987-1992						

Table 28 Supply reliability — historic conditions								
Average / Normal Water Year	Single Dry Water	Multiple Dry Water Years						
Average / Normal Water Teal	Year	Year 1	Year 2	Year 3	Year 4			
289,690	217,564	248,914	248,914	248,914	248,914			
Percent of Average/Normal Year:	75.1%	85.9%	85.9%	85.9%	85.9%			

Table 29  Factors resulting in inconsistency of supply									
Water supply sources <sup>1</sup>		Specific source name, if any	Limitation quantification	Legal	Environmental	Water quality	Climatic	Additional information	
PG&E Zone 1			25% to 50%				Х		
PG&E Zone 3			25% to 50%				Х		
Central Valley Project			25%				Х		
Middle Fork Project			N/A					Permit Extension	
Units (circle one): 1From Table 16.	acre-feet per year	million gallons per year	cubic feet per year						

Table 30									
Water quality — current and projected water supply impacts									
Water source         Description of condition         2010         2015         2020         2025         2030         2035 - opt							2035 - opt		
PG&E Zone 1	Contract Renewal		100,400	100,400	100,400	100,400	100,400	100,400	
PG&E Zone 3	No Threat		25,000	25,000	25,000	25,000	25,000	25,000	
Central Valley Project	Limited PI	ace of Use	35,000	35,000	35,000	35,000	35,000	35,000	
Middle Fork Project	Permit E	Permit Extension		120,000	120,000	120,000	120,000	120,000	
Units (circle one):	acre-feet per year	million gallons per year	cubic feet per year						

	Table 31								
Supply reliability — current water sources									
Water county course.	Average / Normal	Multiple Dry Water							
Water supply sources <sup>1</sup>	Water Year Supply <sup>2</sup>	Year Supply <sup>2</sup> Year 2011	Year 2012	Year 2013					
PG&E Zone 1	100,400	75,300	75,300	75,300					
PG&E Zone 3	25,000	18,750	18,750	18,750					
Central Valley Project	35,000	26,250	26,250	26,250					
Ground Water	1,062	11,062	11,062	11,062					
Middle Fork Project	120,000	120,000	120,000	120,000					
Percent of normal year:	100.0%	89.3%	89.3%	89.3%					
Units (circle one): acre-feet per year	million gallons per year	cubic feet per year							
From Table 16.	•								
See Table 27 for basis of water type years.									

		Table 32								
Supply and demand comparison — normal year										
2015 2020 2025 2030 2035 - opt										
Supply totals (from Table 16)	251,548	289,124	290,309	291,494	292,638					
Demand totals (From Table 11)	182,889	198,112	213,878	218,941	223,680					
Difference	68,660	91,013	76,431	72,553	68,958					
Difference as % of Supply	27.3%	31.5%	26.3%	24.9%	23.6%					
Difference as % of Demand	37.5%	45.9%	35.7%	33.1%	30.8%					
Units are in acre-feet per year.			•							

	Table 33									
Supply and demand comparison — single dry year										
	2015	2020	2025	2030	2035 - opt					
Supply totals <sup>1,2</sup>	187,158	212,988	214,176	215,365	216,512					
Demand totals <sup>2,3,4</sup>	148,599	165,443	182,870	189,609	196,105					
Difference	38,559	47,544	31,306	25,756	20,407					
Difference as % of Supply	20.6%	22.3%	14.6%	12.0%	9.4%					
Difference as % of Demand	25.9%	28.7%	17.1%	13.6%	10.4%					

Units are in acre-feet per year.

1Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.

2Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

3Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing,

and amount of water.

4The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

		Table	34					
Supply and demand comparison — multiple dry-year events								
		2015	2020	2025	2030	2035 - opt		
	Supply totals <sup>1,2</sup>	213,536	215,797	244,998	246,049	247,067		
	Demand totals <sup>2,3,4</sup>	145,545	162,074	179,385	188,261	194,806		
Multiple-dry year	Difference	67,991	53,722	65,613	57,788	52,261		
first year supply	Difference as % of Supply	31.8%	24.9%	26.8%	23.5%	21.2%		
	Difference as % of Demand	46.7%	33.1%	36.6%	30.7%	26.8%		
	Supply totals <sup>1,2</sup>	213,536	215,797	244,998	246,049	247,067		
	Demand totals <sup>2,3,4</sup>	145,545	162,074	179,385	188,261	194,806		
Multiple-dry year	Difference	67,991	53,722	65,613	57,788	52,261		
second year supply	Difference as % of Supply	31.8%	24.9%	26.8%	23.5%	21.2%		
	Difference as % of Demand	46.7%	33.1%	36.6%	30.7%	26.8%		
	Supply totals <sup>1,2</sup>	213,536	215,797	244,998	246,049	247,067		
	Demand totals <sup>2,3,4</sup>	145,545	162,074	179,385	188,261	194,806		
Multiple-dry year	Difference	67,991	53,722	65,613	57,788	52,261		
third year supply	Difference as % of Supply	31.8%	24.9%	26.8%	23.5%	21.2%		
	Difference as % of Demand	46.7%	33.1%	36.6%	30.7%	26.8%		

Units are in acre-feet per year.

1Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.

2Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

3Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.

4The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Table 35 Water shortage contingency — rationing stages to address water supply shortages				
Stage No.	Water Supply Conditions	% Shortage		
Normal	Supplies available to meet all conditions	None		
Stage 1	Probability that supplies will not meet demands	Up to 10%		
Stage 2	Supplies will not be able to meet expected demands	10-25%		
Stage 3	Supplies not meeting current demands	25-30%		
Stage 4	Major failure of a supply, storage, or distribution system	30% or greater		

10ne of the stages of action must be designed to address a 50 percent reduction in water supply.

Table 36 Water shortage contingency — mandatory prohibitions				
Examples of Prohibitions	Stage When Prohibition is Voluntarily Requested	Stage When Prohibition Becomes Mandatory		
No water for street and sidewalk cleaning	1	2		
Restriction on new connections	2	3/4		
Reduction in overall usage	1	2		
No lawn/landscape irrigation	2	3		
No non-essential flushing	2	2		
Mandatory reclaimed water use	3	3		

Table 37 Water shortage contingency — consumption reduction methods					
Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)			
Education Programs	2	0-5%			
Demand Reduction Programs	3	6-10%			
Mandatory Rationing	2	11-25%			
Percentage Reduction by Customer Type	2	11-25%			
Limited Landscape and Pasture Irrigation	2	11-25%			
Irrigation Allowed Only in Off-Peak Hours	2	11-25%			
Implement Drought Rates	3	26-50%			
Restrict New Landscape Irrigation	3	26-50%			
Restricted building Permits (long term only)	4	>50%			
Restriction for Only Priority Uses	4	>50%			

Table 38	
Water shortage contingency — penalties and charges	
Penalties or Charges	Stage When Penalty Takes Effect
Penalties for Not Reducing Consumption	3
Termination of Service and Reconnection Fee	4

Appendix A-2 DWR Checklist	
Placer County Water Agency	
2010 Urban Water Management Plan Adopted June 16, 2011	

Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
PLAN	PREPARATION			
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1.2
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1.2 Appendix B-3
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.3 Appendix B-1
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)	To be included in future UWMP amendments	Section 1.3
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Section 1.3 Appendix B-2
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1.3 Appendix B-2
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642	Future resolutions to be provided for future amendments	Section 1.3 Appendix B-1
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Appendix B-1

N.	LIMAND and the second a	Calif. Water	A dalition of planification	L IVA/A 4 D. L 43
No.	UWMP requirement <sup>a</sup>	Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)	To be included in future UWMP amendments	Section 1.3
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645	To be included in future UWMP amendments	Section 1.3
SYSTE	M DESCRIPTION			
8	Describe the water supplier service area.	10631(a)		Section 2.1.1
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.1.2 Section 2.1.4
10	Indicate the current population of the service area	10631(a)		Section 2.1.4 Table 2-4 Appendix C-3
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.1.4 Table 2-4
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2.1
SYSTE	EM DEMANDS			
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 4.5 Appendix C-3
2	Wholesalers: Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. Retailers: Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Section 4.1.5 Section 1.3 Appendix B-2
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		N/A form not ye available

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Appendix A-1 (Tables 3 to 7) Section 4.1 Section 4.2 Section 4.3 Section 4.4
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 3.1.1 Section 3.1.3 Appendix D-2
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 4.4.1
SYSTE	EM SUPPLIES			
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 3.6
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 3.2
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)	-	Section 3.2.1.1 Appendix D-3
16	Describe the groundwater basin(s).	10631(b)(2)		Section 3.2.1 Section 3.2.2
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		N/A

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		N/A
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 3.2.1 Section 3.2.2
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 3.2.2 Table 3-2
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 3.2.2 Table 3-3
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 3.5
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 3.2.1 Section 3.7
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 3.3
14	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 7.3
15	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 7.2

		Calif. Water		
No.	UWMP requirement <sup>a</sup>	Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 7.2 Table 7-3
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 7.2 Table 7-5 Table 7-7
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 7.3 Table 7-7 Section 7-4
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 7.6 Table 7-10
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Section 7.5
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Section 7.3 Section 7.5
WATE	R SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLA	NNING <sup>b</sup>		
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		N/A (all in region) Section 5
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 3.7
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		N/A Section 3.7
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 6

		Calif. Water	A 1 120 1 1 1 100 10	LINAMARI
No.	UWMP requirement <sup>a</sup>	Code reference	Additional clarification	UWMP location
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic	10632(b)		Section 3.7 Appendix A-1
	sequence for the agency's water supply.			DWR Table 31
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 6.4
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Appendix B-4 Table B-3
39	Specify consumption reduction methods in the most restrictive stages.  Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Appendix B-4 Table B-4
10	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Appendix B-4 Table B-5
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Section 6.5 Appendix B-4 Table B-7
12	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix B-4
13	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 5.1.2 Table 5-2 (Programmatic BMPs)
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Appendix A-1 DWR Table 30 Section 3

		Calif. Water		
No.	UWMP requirement <sup>a</sup>	Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 8
DEMA	ND MANAGEMENT MEASURES			
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 5
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 5.1.2 Table 5-2 (Programmatic BMPs)
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Section 5.2.1
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	N/A All Implemented
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Appendix B-6

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

Appendix B-1 Resolution Adopting the 2010 UWMP
Placer County Water Agency 2010 Urban Water Management Plan
2010 Urban Water Management Plan Adopted June 16, 2011

# RESOLUTION NO. 11-22 OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY ADOPTING THE 2010 UPDATE TO THE AGENCY URBAN WATER MANAGEMENT PLAN

WHEREAS, in 1984 the California Legislature enacted the Urban Water

Management Act requiring every urban water supplier providing water for municipal purposes to

more than 3,000 connections to adopt and submit to the California Department of Water Resources

an Urban Water Management Plan ("Plan") and to update the Plan every five years;

WHEREAS, Placer County Water Agency has, pursuant to the Act, prepared an Urban Water Management Plan in 1985, and updated the Plan in 1992, 1997, 2000, and 2005; and WHEREAS, the Plan, dated May 2011, is the update of the last Urban Water

WHEREAS, the Plan was released for public comment on May 13, 2011 and a

Management Plan adopted by the Agency; and

public hearing to receive oral comments was held on June 16, 2011; and

WHEREAS, the Board of Directors of Placer County Water Agency has reviewed the Plan, received public comments thereon, and incorporated such amendments to the Plan as it has deemed warranted;

BE IT RESOLVED by the Board of Directors of the Placer County Water Agency that:

- The public draft of the 2010 Draft Urban Water Management Plan, with changes incorporated during and resulting from public review, is hereby adopted, and
- 2. The Clerk of the Board is directed to transmit a copy of the approved Plan to the California Department of Water Resources.

-1-

The foregoing resolution was duly passed at a regular meeting of the Board of Directors of the Placer County Water Agency held on the 16<sup>th</sup> day of June, 2011, by the following vote on roll call:

AYES DIRECTORS: Gray Allen, Alex Ferreira, Mike Lee, and

Chairman Lowell Jarvis

NOES DIRECTORS: None

ABSENT DIRECTORS: None

Signed and approved by me after its passage this 16th day of June, 2011.

Chair, Board of Directors Placer County Water Agency

ATTEST:

Clerk, Board of Directors Placer County Water Agency

z:/ns.UWMP.Resolution Adopt.6-16-11

Placer County Water Agency

# THIS PAGE INTENTIONALLY LEFT BLANK

Appendix B-2	<b>Copies of Notice Publications</b>
Placer County Water 2010 Urban Water Ma Adopted June 16, 201	anagement Plan

### NOTICE OF AVAILABILITY OF 2010 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE

NOTICE OF AVAILABILITY OF 2010 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS PLACER COUNTY WATER AGENCY
NOTICE IS HEREBY GIVEN that the Placer County Water Agency'sDraft 2010 Urban Water Management Plan Update (Draft Update) is available for public review and comment, and that the Board of Directors of the Placer County Water Agencyhas set a public hearing to receive comments on the Draft Update. The public hearing is to be conducted on June 16, 2011 at 2:00 pm at the regularly scheduled meeting of the PCWA Board of Directors, which will be held at its Business Center. TheBusiness Center is located at144 Ferguson Road, Auburn, CA, 95604.
NOTICE IS FURTHER GIVEN that, as part of the public hearing on the Draft Update, the Placer County Water Agency will conduct a public hearing to (1) adopt a method, pursuant to California Water Code (CWC) § 10608:20, for determining its urban water use target in 2020, (2) allow community input regarding its plan for achieving the water conservation provisions of its Draft Update, and (3) consider the economic impacts of its implementation plan for achieving its 2020 urban water use target.

Copies of the Draft Update are available for public review at ware use a pet on or affer May 16: 2011 or available in hard copy.

Copies of the Draft Update are available for public review at <a href="https://www.pcwa.net">www.pcwa.net</a> on or after May 16, 2011 or available in hard copy at the Agency's Business Center for review on-site. Members of the public are invited to present their views on the Draft Update, inthe public are invited to present their views on the Draft Update, including the water conservation provisions of the Draft Update required pursuant to CWC § 10608 et seq. Comments may be presented during the public hearing on June 16, 2011 at 2:00 pm or may be submitted in writing prior to the hearing, addressed to Tony Firenzi, Senior Engineer, Placer County Water Agency, 144 Ferguson Road, Auburn, CA, 95604.

PUBLISHED IN AUBURN JOURNAL: MAY 13, 20, 2011

The above space is reserved for Court/County Filed Date Stamp

# PROOF OF PUBLICATION (2015.5 C.C.P.)

# STATE OF CALIFORNIA **County of Placer**

I am a citizen of the United States and employed by a publication in the County aforesaid. I am over the age of eighteen years, and not a party to the mentioned matter. I am the principal clerk of The Auburn Journal, a newspaper of general circulation, in the City of Auburn, which is printed and published in the County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of May 26, 1952 (Case Number 17407). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

MAY 13, 20

I certify, under penalty of perjury, that the foregoing is true and correct.

Terry Clark

Dated in Auburn, California

MAY 20, 2011

PROOF OF PUBLICATION THE AUBURN JOURNAL 1030 High Street Auburn, CA 95604-5910

Appendix B-3	Copies of Notification Letters Sent
Placer County Water 010 Urban Water Madopted June 16, 201	Agency anagement Plan



January 13, 2011 File No. 10014E

Ray Kerridge City Manager City of Roseville 2005 Hilltop Circle Roseville, CA 95747

Dear Mr. Kerridge:

PLACER COUNTY WATER AGENCY

SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

Gray Allen, District 1
Alex Ferreira, District 2
Lowell Jarvis, District 7

Mike Lee, District Ben Mavy, District

David Breninger, General Manag Ed Tiedemann, General Coun

Bpc Box 6570

144 Ferguson Road

Tony

Heather

The Placer County Water Agency is preparing an Urban Water Management Plan (UWMP) as required by the California Water Code (CWC). Any city or county within which a water supplier delivers water is to be notified at least 60 days prior to a public hearing (which date is still to be determined) that the UWMP is being reviewed and amendments and changes will be considered. Also, any city or county within which the city supplies water shall be notified of the date and time of the hearing.

Pursuant to CWC § 10608 et seq., an urban water supplier must also hold at least one public hearing to: (1) allow community input regarding the urban retail water supplier's implementation plan for the water conservation provisions, (2) consider the economic impacts of the urban retail water supplier's implementation plan for complying with CWC § 10608 et seq., and (3) adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

This letter serves as notice that the PCWA is currently reviewing and amending its 2005 UWMP. The PCWA will ultimately adopt an updated UWMP, after a public hearing, by July 1, 2011. It is likely that the PCWA will use the public hearing for review of its UWMP to also meet the public hearing requirements of CWC § 10608 et seq. Once the public hearing date is set, the PCWA will notify you of the date and time.

If you have any questions regarding PCWA's UWMP, please do not hesitate to contact me at (530) 823-4883.

Sincerely,

Brian C. Martin, P.E.

Director of Technical Services

BCM:ns

pc:

Dave Breninger, PCWA Einar Maisch, PCWA

Derrick Whitehead, City of Roseville

um C Martin.

z:/ns.uwmp.city-county notice.1-12-2011

#### Notice of Public Hearing 2010 Urban Water Management Plan January 13, 2011

Full Name	Last Name	Title	Company	Address	City, State Zip
Tom Miller	Mr. Miller	County Executive Officer	County of Placer	175 Fulweiler Avenue	Auburn, CA 95603
Ray Kerridge	Mr. Kerridge	City Manager	City of Roseville	2005 Hilltop Circle	Roseville, CA 95747
Rick Horst	Mr. Horst	City Manager	City of Rocklin	3970 Rocklin Road	Rocklin, CA 95677
Jim Estep	Mr. Estep	City Manager	City of Lincoln	600 6th Street	Lincoln, CA 95648-1825
Perry Beck	Mr. Beck	Town Manager	Town of Loomis	3665 Taylor Road	Loomis, CA 95650
Robert Richardson	Mr. Richardson	City Manager	City of Auburn	1225 Lincoln Way, Room 3	Auburn, CA 95603
Bruce Kranz	Mr. Kranz	City Manager	City of Colfax	P.O. Box 702	Colfax, CA 95713

SINCE 1957

BOARD OF DIRECTORS

BUSINESS CENTER
144 Ferguson Road

Gray Allen, District I

MAIL

Alex Ferreira, District 2 Lowell Jarvis, District 3

P.O. Box 6570 Auburn, CA 95604

Mike Lee, District 4
Ben Mavy, District 5

PHONE

800.464.0030

530.823.4850

David Breninger, General Manager
Ed Tiedemann, General Counsel

WWW.PCWA.NET

May 16, 2011 File No. 10014E

Mr. Ray Kerridge, City Manager City of Roseville 2005 Hilltop Circle Roseville, CA 95747

SUBJECT:

2010 Draft Urban Water Management Plan Update

Dear Mr. Kerridge:

Please be advised that Placer County Water Agency has prepared its Draft Update of the 2010 Urban Water Management Plan (UWMP). This plan was prepared in accordance with the Urban Water Management Act defined by the California Water Code Division 6, Part 2.6 and Sections 10610 through 10657. Copies of the Draft Update are available at www.pcwa.net. If you would like to have a hard copy sent to you please contact Nicole Snyder at (530) 823-4801.

This letter is to advise you that the Placer County Water Agency Board of Directors will hold a public hearing at 2:00 pm at its June 16, 2011 Board meeting at the Agency's Business Center, 144 Ferguson Road, Auburn, CA. This letter further advises you of the opportunity to provide comments on the Placer County Water Agency 2010 Urban Water Management Plan. You may submit written comments prior to the public hearing. Please address these comments to me at the address noted on the letterhead.

If you have any questions please do not hesitate to call.

uni C. Martin

Sincerely,

Brian C. Martin, P.E.

Director of Technical Services

BCM:ns

z:/ns.uwmp.letter.5-16-11

#### 2010 Draft UWMP Update Mail List 5-16-11

Name	Contact	Company	Address	City, State Zip
Mr. Ray Kerridge, City Manager	Mr. Kerridge	City of Roseville	2005 Hilltop Circle	Roseville, CA 95747
Mr. Jim Estep, City Manager	Mr. Estep	City of Lincoln	600 6th Street	Lincoln, CA 95648
Ms. Shauna Lorance, General Manager	Ms. Lorance	San Juan Water District	PO Box 2157	Granite Bay, CA 95746
Mr. Andy Soule, General Manager	Mr. Soule	California American Water Company	4701 Beloit Drive	Sacramento, CA 95838-2434
Mr. Ron Nelson, General Manager	Mr. Nelson	Nevada Irrigation District	1036 W. Main Street	Grass Valley, CA 95945
Mr. Robert S. Roscoe, P.E., General Manager	Mr. Roscoe	Sacramento Suburban Water District	3701 Marconi Avenue, Suite 100	Sacramento, CA 95821-5346
Mr. Michael Holley, General Manager	Mr. Holley	Truckee Donner Public Utility District	PO Box 309	Truckee, CA 96160
Mr. Tom Miller, County Executive Officer	Mr. Miller	County of Placer	175 Fulweiler Avenue	Auburn, CA 95603
Mr. Rick Horst, City Manager	Mr. Horst	City of Rocklin	3970 Rocklin Road	Rocklin, CA 95677
Mr. Perry Beck, Town Manager	Mr. Beck	Town of Loomis	3665 Taylor Road	Loomis, CA 95650
Mr. Robert Richardson, City Manager	Mr. Richardson	City of Auburn	1225 Lincoln Way, Room 3	Auburn, CA 95603
Mr. Bruce Kranz, City Manager	Mr. Kranz	City of Colfax	PO Box 702	Colfax, CA 95713
Mr. Norm Dean, General Manager	Mr. Dean	Meadow Vista Water District	17000 Placer Hills Road	Meadow Vista, CA 95722
Mr. Ernie Bullard	Mr. Bullard	Dutch Flat Mutual	PO Box 50	Dutch Flat, CA 95714
Mr. Alan Johnson, President	Mr. Johnson	Lake Folsom Mutual Water	8364 Parus Way	Granite Bay, CA 95746-7339
Mr. Rob Hribar	Mr. Hribar	Golden Hills Mutual Water Co.	4061 Miners Drive	Loomis, CA 95650
Ms. Corrie Johnson	Ms. Johnson	Lakeview Hills Community Association	PO Box 1459	Folsom, CA 95746
Mr. Robert Healy	Mr. Healy	Heather Glen Community Services District	PO Box 357	Applegate, CA 95703
Mr. Gerry LaBudde	Mr. LaBudde	Weimar Water District	PO Box 598	Weimar, CA 95736
Mr. Don Elias, District Secretary/General Manager	Mr. Elias	Christian Valley Park Community Services	3333 Christian Valley Road	Auburn, CA 95602
Mr. Mike Staudenmayer, General Manager	Mr. Staudenmayer	Northstar Community Services District	908 Northstar Drive	Truckee, CA 96161
Mr. Jason Tiffany, General Manager	Mr. Tiffany	Midway Heights County Water District	PO Box 596	Meadow Vista, CA 95722
Mr. Jeff Windeshausen	Mr. Windeshausen	Willo-Glen Water Co.	PO Box 659	Loomis, CA 95650
Mr. Don Basham	Mr. Basham	Alpine Meadows Water Association	115 Alpine Drive	Colfax, CA 95713
Mr. Ron Becker	Mr. Becker	Hidden Valley Community Association	7072 Pine Gate Way	Granite Bay, CA 95746

THIS PAG	E INTENT	ΓΙΟΝΑLL	Y LEFT BLA	NK
THIS PAG	E INTEN	ΓΙΟΝΑLL	Y LEFT BLA	NK
THIS PAG	E INTEN	ΓΙΟΝΑLL	Y LEFT BLA	NK
THIS PAG	E INTEN	ΓΙΟΝΑLL	Y LEFT BLA	NK

Appendix B-4	Water Shortage Contingency Plan
Placer County Water	Agency
2010 Urban Water MacAdopted June 16, 201	anagement Plan

## **Appendix B-4 Water Shortage Contingency Plan**

### **Western Water System**

Through its Western Water System PCWA currently provides approximately 123,000 acre-feet of water annually, either directly or indirectly, to over 62,000 individual homes, businesses and irrigation customers, serving a total population of over 150,000.

The area served by the Western Water System extends from the community of Alta on the east, down the interstate 80 corridor, to the Sutter and Sacramento county lines on the west and south. The service area includes treated water deliveries to the communities of Alta, Monte Vista, Applegate, Colfax, Auburn, Loomis, Rocklin and Lincoln and much of the surrounding unincorporated areas. In addition to treated water service, PCWA provides irrigation water through its extensive canal system to individual customers, and untreated water for treatment and resale by other retail water purveyors.

The Western Water System has three primary sources of surface water: (1) PG&E contract supplies from the Yuba and Bear Rivers delivered through PG&E's Drum-Spaulding hydroelectric system into a network of distribution canals at various locations that are owned and operated by PCWA, (2) PCWA's Middle Fork Project water rights that can be delivered through a pump station on the American River near Auburn into the Auburn Ravine Tunnel, and (3) water rights on Canyon Creek. PCWA also has limited access to groundwater in the farthest western portions of its service area and it has a number of emergency intertie connections with other purveyors.

In 2009 the total delivery from the PG&E Yuba-Bear River source was about 105,000 acre-feet, an additional 11,000 acre-feet was delivered from the American River, 3,000 acre-feet was delivered from Canyon Creek, and 2,000 acre-feet was transferred from Nevada Irrigation District.

PCWA's canal system is the backbone of its Western Water System, taking gravity water delivery from PG&E at various locations, and delivering water to PCWA treatment plants, the treatment plants of several other public and private water purveyors and delivering irrigation water to approximately 3,900 customers.

The American River supply has only recently been developed as a reliable source; the infrastructure was constructed to facilitate continued planned urban developments as the Agency has reached its maximum allowed delivery rate under its PG&E Zone 1 water supply contract. The design delivery rate from the American River is about 100 cfs,

which is intended to provide about 35,500 acre-feet annually into the Western Water System.

In 2009 approximately 82,000 acre-feet (68%) was used for irrigation purposes serving approximately 3,900 customers and 39,000 acre-feet (32%) was delivered as treated water for municipal and industrial purposes serving a population in excess of 150,000.

#### **Dry Year Supply Reliability**

A review of historic PG&E delivery records, including the 1977 drought, and modeling studies done on the Middle Fork Project indicate that the worst case dry year scenario, at current levels of development, should assume only a 50% supply from PG&E and other watershed supplies, but a full supply from the Middle Fork Project on the American River.

#### **Water Shortage Actions - General**

A 50% cutback in PG&E and other non-American River deliveries means the loss of about 55,000 acre-feet based on 2009 deliveries.

One of the keys to understanding how to respond to the loss of such a significant amount of water is to first understand what is possible in terms of the use of other resources, such as Middle Fork Project water.

Middle Fork Project water can be double pumped, from the American River into the Auburn Ravine Tunnel, and from the tunnel up to the ground surface near Ophir, from where it can be delivered to PCWA's Foothill water treatment plant. At peak demand on the treated water system, Middle Fork Project water would be able to supply the Foothill Water Treatment Plant with enough water to meet lower Zone 1 treated water demands of about 32,000 acre-feet. But the American River supply facilities have little to no additional capacity to supply water for PCWA irrigation customers.

During a 50% cutback, the estimated 55,000 acre-feet of available supply would need to be distributed to treated water customers from Alta down through Auburn and to irrigation customers throughout the Western Water System. With the Lower Zone 1 treated water customers moved off the PG&E supply, the remaining normal demand for treated water and irrigation water is about 7,000 acre-feet (8%) for treated water and 82,000 acre-feet (92%) for irrigation.

Based upon these physical delivery characteristics and the large difference between treated and irrigation demands dependent upon the reduced PG&E supply, more severe cuts in delivery must be implemented in irrigation canals than in the treated water

systems. Additionally, state law and practical necessity dictate that public health and safety needs be prioritized, which rely on the treated water systems, and include fire protection, sanitation, hospitals, schools, and other critical needs. It should be noted that actions taken to reduce treated water demands are different than those taken in the canal system. Actions taken in the treated water system are generally requests upon the customers, whereas, actions taken in the canal system are operational changes made by the Agency.

#### **Water Shortage Actions – Irrigation Canal Systems**

With only a 50% supply, about 55,000 acre-feet, available from PG&E and other non-American River supplies, Lower Zone 1 treated water demands, approximately 32,000 acre-feet, would be supplied from the American River, and the other 7,000 acre-feet of treated water demands would be supplied from the remaining 55,000 acre-feet, which would leave 48,000 acre-feet of water to meet about 82,000 acre-feet of irrigation demands within the Western Water System.

The above scenario assumes full delivery to meet normal treated water demands with the remaining water available to meet irrigation demands. A water supply shortage that would result in a 50% reduction in water deliveries would be a regional water supply crisis, and probably a statewide crisis as well, with major news coverage. Treated water customers would be asked by the Agency to significantly reduce their water consumption and would no doubt respond favorably. However, even a 25% reduction in treated water consumption, which would be substantial given that it would be on top of the Agency's already aggressive normal year water conservation program, yields a relatively small amount of water (9,800 acre-feet) compared to a normal year irrigation demand of 82,000 acre-feet. Planning for the worst case in the irrigation system and then adaptively managing any cutbacks in treated water use to supplement irrigation deliveries is the recommended approach.

The actions required to reduce irrigation deliveries by 34,000 acre-feet (41%) shall include, but are not limited to, suspending deliveries to Zone 5 customers, changing the sizes of the orifices through which water is delivered to customers and instituting "rolling" or alternating canal outages. A variance procedure shall be established to excuse some customers from these actions based upon undue hardship. Such variances shall not prevent the Agency from meeting public health and safety needs.

#### Water Shortage Actions – Treated Water Systems

Actions intended to meet target demand reductions are detailed below for each of the stages. These actions shall be used as a starting point to meet targets and shall be monitored, as described later in this plan, for performance. The specific actions are not limited to the stages under which they are described and may be implemented in earlier or later stages as needed to meet targets.

**Stage 1, "Water Alert," up to 10% Shortage** - In addition to all the above, the Agency shall:

Strongly encourage the following treated water actions:

- 1. Use a broom or rake to clean streets, sidewalks, parking lots or driveways; do not use water for outdoor cleaning.
- To the extent possible, do not add water to decorative fountains, pools, ponds and decorative waterways and do not refill them until the water shortage emergency is over. Use water recirculation system in all decorative water features.
- 3. Run dishwashers and washing machines only when there is a full load.
- 4. Repair toilet leaks and dripping faucets.
- 5. If drained, swimming pools should not be refilled.
- 6. Do not run water needlessly such as when brushing teeth, washing dishes by hand or shaving.
- 7. Limit shower time to five minutes and install low-flow shower heads and faucet aerators.
- 8. Never put water down the drain when you can use it for purposes such as watering plants, garden, or cleaning.
- 9. Avoid flushing the toilet unnecessarily. Dispose of facial tissues and other such waste in the trash rather than the toilet.
- 10. Serve water to commercial patrons only if expressly requested.

**Stage 2, "Water Warning," up to 25% Shortage** – In addition to all the above, the Agency shall:

Request all residential, commercial, and wholesale customers of treated water to reduce their water consumption by 25% or more by implementing at least the following actions:

- Customers with an even-numbered street address should use water outdoors only on Tuesday, Thursday and Saturday.
- Customers with an odd-numbered street address should use water outdoors only on Wednesday, Friday and Sunday.
- 3. Do not use water outdoors on Mondays.
- 4. Water only during early morning or after sunset and avoid watering during daylight hours.
- 5. Reset water timers to reduce by 25% the minutes a valve station is operating, to reduce outdoor irrigation to the extent practicable. Inspect your landscape irrigation systems for leaks, adjust spray heads to minimize overspray and prevent runoff.
- 6. Prohibit the use of treated water for non-essential flushing of mains and fire hydrants.
- 7. Applications for use of water from public hydrants will be granted subject to limitations of hydrant location and such other conditions as are reasonably necessary to prevent depletion of supplies needed for public health and safety purposes.
- 8. Contact all resale water suppliers to which the Agency provides water and urge that each request its customers to conserve water and reduce water use by 25% by adhering to the indoor, outdoor, commercial and hydrant water use practices set forth herein and as implemented by PCWA.

Stage 3, "Water Crisis," 35% Shortage – In addition to all the above, the Agency shall:

Request all residential, commercial, and wholesale customers of treated water to reduce their water consumption by 35% or more by implementing at least the following actions:

- Customers with an even-numbered street address should use water outdoors only two days a week, Wednesday and Saturday.
- 2. Customers with an odd-numbered street address should use water outdoors only two days a week, Thursday and Sunday.

- 3. No watering on Monday, Tuesday and Friday.
- 4. Water only during early morning or after sunset and avoid watering during daylight hours.
- 5. Reset water timers to reduce by 35% the minutes a valve station is operating, to reduce outdoor irrigation to the extent practicable. Inspect your landscape irrigation systems for leaks, adjust spray heads to minimize overspray and prevent runoff.
- 6. Implement conservation pricing on treated water.
- 7. Public facilities should reduce their outdoor water usage by at least 35% from water they purchased under normal conditions.
- 8. Require the use of reclaimed water for dust control, earthwork, or road construction.
- 9. Implement stricter enforcement of the Agency's Rules and Regulations regarding waste.

**Stage 4, "Water Emergency," 50% and Greater Shortage**—Under stage 4 conditions, In addition to all the above, the Agency Shall:

Request all residential, commercial, and wholesale customers of treated water to reduce their water consumption by 50% or more by implementing at least the following actions:

- 1. Require that all treated water customers reduce their water usage by 50% of normal usage.
- 2. Suspend all new treated water connections.
- 3. Prohibit all residential lawn, garden, and landscape irrigation except for those customers who utilize water efficient irrigation systems.

#### **Eastern Water System**

Through its Eastern Water System PCWA currently provides approximately 150 acre-feet of water annually to residential and commercial customers located in Martis Valley just south of Truckee. This water system, named Zone 4, is disconnected from the Agency's other water system infrastructure. Zone 4 is neighbored by Northstar Community Services District (CSD) to the south and Truckee Donner Public Utility District (PUD) to the north. Currently, a single intertie exists with Northstar CSD.

The Eastern Water System is served entirely by groundwater from the Martis Valley Groundwater Basin located directly beneath the service area. The groundwater basin has a storage volume that far exceeds current annual withdrawals. The estimated annual safe-yield is 24,000 acre-feet, whereas, the current annual withdrawals are approximately 7,000 acre-feet. Based on the more than adequate storage and safe-yield of the basin, the likely cause of a water shortage in the Eastern Water System is infrastructure failure.

The repair time for an infrastructure failure in the Eastern Water System would generally be on the order of days for pipelines and weeks for major infrastructure, such as tanks and wells. However, the system is designed with significant redundancy, such that risk of a water shortage resulting from infrastructure failure is greatly reduced and generally includes only dead-end water mains.

In the case of a water shortage in the Eastern Water System, the water shortage actions detailed above for treated water systems shall be used.

#### **Stage Implementation and Monitoring Procedures**

The Agency maintains a draft water shortage contingency resolution that is adopted during water shortages. Resolution 11-17 resulting from the April 19, 2011 failure of PG&E's Bear River Canal is provided as an example as referenced in the next section of this plan. Legal requirements, including public notices and hearings, shall be followed in adopting any resolution. However, Agency staff may implement operational changes in the canal systems and request voluntary actions by treated water customers on an interim basis to meet public health and safety needs as detailed above until such a resolution can be adopted.

In a water shortage, and particularly that resulting from failure of infrastructure, critical roles shall be established and appointed by the General Manager. These roles may include, but are not limited to Incident Commander, Operations Manager, and Public Information Officer. Other supporting roles that should be considered are engineering, mapping, customer service, information service, and public outreach. Other more detailed instructions may be found in the Agency's Emergency Response Plan.

Under normal water supply conditions, water production figures are recorded daily by Field Services and Technical Services operations staff. Totals are reported monthly and incorporated into a water supply report.

During a Stage 1 water shortage, weekly production figures are reported to the Director of Technical Services, or his or her designee. Monthly production is compared to the

target production to verify that the reduction goal is being met. Appropriate monthly reports are forwarded to the department heads and General Manager's office. Appropriate monthly reports are also sent to the General Manager and are included in the Board of Directors meeting materials.

During a Stage 2, 3, and 4 water shortages, daily production figures are reported to the Director of Technical Services, or his or her designee. Weekly production is compared to the target weekly production to verify that the reduction goal is being met. Appropriate weekly reports are forwarded to the department heads and General Manager's office. Appropriate monthly reports are sent to the General Manager and are included in the Board of Directors meeting materials.

In all stages, if targets are not met, Agency staff may implement further actions as long as they fall within the limits set by the resolution adopted by the Board of Directors in response to the shortage. Actions needed in excess of these limits, or reductions in actions, must be approved by the Board of Directors.

#### Case Study - 2011 Failure of PG&E's Bear River Canal

PG&E's Bear River Canal, the primary source of water to PCWA's Zone 1 system, completely failed due to landslide on April 19, 2011 about 1.5 miles downstream of Rollins Reservoir, near the City of Colfax. Repairs were completed and normal water service from PG&E to PCWA was restored 48 days later, on June 5, 2011. For those 48 days PCWA operated under severe water shortage conditions. Initially the only water available from PG&E to the Western Water System was water that could be delivered into the Agency's Boardman Canal near Alta, above the point of the failure. Given the time of year, this amounted to a 90% reduction in normal deliveries from PG&E. In this case the cause was infrastructure failure and not a drought, but the impact to PCWA customers and PCWA's responses were similar to what they would be in a drought, and providing the record of this experience herein may provide useful information in a future water shortage situation.

#### **Catastrophic Supply Interruption**

The Agency's water systems are susceptible to interruption in water supply due to catastrophic events. In particular, fire, landslides, major pipeline failures, power outages, and earthquakes are risks to PCWA water supply infrastructure.

Water supplied by PG&E is delivered through a canal system that traverses hillsides and crosses valleys using raised flumes and pipelines. The Agency has established a Renewal and Replacement Program to replace aging infrastructure along the canal system;

however, this program is phased over a long period of time. The remaining supplies are delivered through pumping stations that have back-up power, with the exception of the American River and Ophir Road Pump Stations.

The Agency has prepared a Security Vulnerability Assessment and maintains an Emergency Response Plan. The Emergency Response Plan provides general procedures for responding to catastrophic supply interruption (i.e. infrastructure failure).

#### **Analysis of Expenditures and Revenue during Shortages**

There are two primary objectives during a water shortage, reduce water use and maintain adequate revenues to meet revenue requirements. Portions of the Agency's revenues are derived from volumetric based water sales, hence, during a water shortage the Agency's revenues would decrease. Depending on the root cause of a water shortage, additional unbudgeted expenses would most likely be incurred and can vary substantially. A drought induced water shortage would result in additional expenses for public outreach, conservation enforcement and various other associated costs. A infrastructure failure induced water shortage would incur similar costs as a drought situation, plus other costs such as construction of alternate source facilities or alternative supply transmission costs, such as pumping which can be very expensive.

For example, if there is water available, the Agency has the ability to access water in the American River through double lift pumping, which based on the current energy prices are estimated at \$1 million per month and would pump an amount equal to approximately 90% of peak demand in a certain service area. However, these costs can vary significantly depending on demand. In an water shortage caused by an infrastructure failure, pumping costs would most likely be the most significant expense. Other non-capital expenses can vary substantially from \$0 to \$50,000 or more per month depending on the nature, magnitude, and duration of the water shortage.

The Agency formally adopted a Net Asset Reserve and Designation Policy that provides for the setting aside of funding for, among other matters, unforeseen needs. This policy is designed to ensure reasonable and adequate funding of Agency reserves and designations. The policy establishes distinct purposes, funding and use for designated amounts, as well as, setting target-funding levels, both minimums and maximums. The policy identifies events or conditions, which would prompt the use of these funds. The Agency has established several Operational Designations as follows: contingencies, operations, catastrophic event and revenue volatility. Each of these designations has varying levels of amounts from zero to \$2.9 million.

The 2010 budget for the Western Water Division and Eastern Water Division were \$35.5 million and \$0.55 million, respectively. The Operational Designation for these two Divisions total \$6 million and \$5,000, respectively. In the event of a water shortage, to maintain adequate revenue requirements, the Agency's Board of Directors could consider the use of designations or a water rate adjustment. The use of designations requires Board approval. Currently, the Agency does not have an established drought or water shortage pricing schedule, thus, any rate adjustment would be required to follow the Proposition 218 notification process and other rate adjustment regulations.

#### **Prohibitions and Penalties**

The Agency prohibits water waste in its Rules and Regulations and has established a water waste charge to recover costs of Agency staff time to respond to the water waste. Additionally, the Rules and Regulations provide for use of flow restrictors and discontinuance of service as enforcement during water shortages.

# THIS PAGE INTENTIONALLY LEFT BLANK

# **Placer County Water Agency**

# Water Shortage Contingency Plan 2011 Failure of PG&E's Bear River Canal Selected Documents

#### **Contents:**

- 1. News Releases
- 2. General Manager's Status Reports
- 3. Director of Field Services' Status Reports
- 4. Notice for Public Hearing
- 5. Board of Directors Resolutions
- 6. PG&E Correspondence
- 7. Letters Sent to Customers
- 8. Water Conservation Flyers
- 9. Public Outreach List
- 10. PCWA Newspaper Advertisements
- 11. PCWA Website Pages
- 12. Fire & Water 2011
- 13. Summary of Agency Costs and Efforts
- 14. Daily Operations Dashboard
- 15. PCWA Western Water System Maps
- 16. Letters of Appreciation

# THIS PAGE INTENTIONALLY LEFT BLANK

# **News Releases**



I44 Ferguson Road

MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

#### FOR IMMEDIATE RELEASE:

April 19, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

Foothill Water Agencies Hustle to Keep Supplies Flowing After Canal Break

AUBURN -- The Placer County Water Agency is striving to keep customers supplied with water after a major break on the Pacific Gas and Electric Company Bear River Canal cut water flows to the Agency and its customers.

PG&E spokesman Paul Moreno said the incident was reported about 5 a.m. Tuesday (Apr. 19) at a remote location near Colfax, below Rollins Reservoir. He said the canal was flowing at a rate of about 400 cubic feet per second when the break occurred and that flows into the canal were stopped directly following the report.

Moreno said the company is still assessing damages but it appears a section of the large canal ruptured after a supporting earthen berm collapsed. Water from the canal ran about 100 feet down the steep canyon wall into the Bear River.

"The canal system was inspected by foot patrol on Apr. 1," Moreno said. "No potential issues were identified at that time. It is not known at this time if heavy recent rains may have contributed to the earthen berm failure."

Meanwhile, PCWA, which receives most of its water supply through the PG&E canal system, was working under emergency procedures to re-route water supplies to the Agency's network of canals and to water quality plants in order to serve its treated water customers.

PCWA immediately took proactive steps to open interties with Nevada Irrigation District (NID) and City of Roseville and began pumping water from the American River to make up for some of the water shortages.

Even so, PCWA Director of Field Services Mike Nichol said irrigation water customers would be impacted the most and that there will be shortages and rolling 24-hour outages until PG&E supplies to raw water customers are fully restored.

PCWA General Manager David Breninger said, "The agency is focused on how to best serve our customers. Treated water customers will be impacted to a lesser extent; but shortages and rolling 24-hour outages are expected, unfortunately, to impact up to 4,000 customers who use raw water from the PCWA canal system until repairs can be made by PG&E to their canal and flows are fully restored to PCWA."

Breninger said, "PCWA is urging all water customers, those using treated, metered water, as well as those using canal water, to please conserve water and to use it efficiently and wisely during the emergency."

Also, NID, which receives water through the same PG&E Bear River Canal for service to irrigation water users in the rural Auburn to Lincoln area, was working with PCWA and making arrangements for alternate water supplies to its Placer County service areas.

Nichols said, "PG&E has advised PCWA that it was unknown at this time how long it will take to repair the PG&E canal and how long the water shortage would last."

A similar incident occurred Apr. 10, 1996 when the Bear River Canal ruptured near the Bear River Campground. The water supply emergency lasted several weeks as PG&E worked its way through a lengthy permitting and repair process.

More information on the water emergency and the areas affected is being made available on the PCWA website at <a href="https://www.pcwa.net">www.pcwa.net</a>.

The agency's Customer Service representatives may be reached at (530) 823-4850.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER

144 Ferguson Road

MAIL

P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

#### FOR IMMEDIATE RELEASE:

April 22, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

# PCWA Response in Wake of Canal Failure: Conservation

AUBURN -- Water supplies to the Placer County Water Agency and its customers remain limited following a major break to a Pacific Gas & Electric Company water supply canal. A comprehensive report of the emergency was given to the PCWA Board of Directors at Thursday's (Apr. 21) board meeting.

"The message to all PCWA customers at this time is water conservation," said PCWA Director of Field Services Mike Nichol, who termed the incident the most serious outage he's seen in 22 years with the water agency.

PCWA staff and officials of the Pacific Gas and Electric Company briefed the board on their respective responses to the Apr. 19 failure of a portion of PG&E's Bear River Canal.

The canal is critically important for conveying water to PCWA and its customers. The PG&E canal was nearly full when a 40-foot section of it ruptured when ground beneath it slid down the hillside. The canal is located in rugged terrain along the Bear River canyon near Colfax.

PG&E Director of Power Generation Alvin Thoma who traveled from San Francisco and Bill Williams, PG&E Hydro Superintendent of PG&E's regional office, briefed the Board about the canal's failure.

Thoma said inspectors, engineers, surveyors, foresters and construction workers were at the scene assessing damages, planning repairs, working with property owners and creating access to the remote site.

He said PG&E is studying all options for a permanent reconstruction of the canal and restoration of water supplies to the agency.

Thoma said PG&E had inspected the canal earlier this month and it showed no apparent signs of stress. He said the incident does not appear to be seismic related and is most likely due to saturated ground from this year's heavy rains.

PCWA staff described the agency's rapid response to the emergency and outlined a variety of strategies being pursued to both cope with and to keep water flowing to agency customers with limited supplies.

Agency General Manager David Breninger said, "The water agency is coordinating with the Nevada Irrigation District, City of Roseville, City of Lincoln and others, as well as pumping water from the agency's American River supplies to supplement flows to the PCWA water system. However, these sources will not make up for all of the shortage caused by the canal's failure."

"The agency is asking all water customers to voluntarily conserve, reduce water usage and to use water efficiently and wisely during the emergency," said Breninger.

In responding to the emergency and in striving to spread as much water as possible to customers across the agency's expansive Zone 1 irrigation canal system, PCWA had to immediately implement rolling canal system "water outages."

"Rotation of canal water availability is necessary so that we can equitably spread as much water and as often as possible to as many Zone 1 irrigation canal customers with our limited supplies. Rolling water outages will continue and may have to extend beyond 24-hour durations until PG&E completes canal repairs and full water supply flows are returned to PCWA," said Breninger.

He added, "Our agricultural growers in far western Placer County, Zone 5 will also receive limited water deliveries through the Auburn Ravine conveyance system."

Breninger urged irrigation canal customers "to implement their own contingency plans for storage, watering animals, livestock and crops while the agency is faced with diminished supplies."

To alert irrigation canal water users to the seriousness of the situation, the agency staff activated its emergency alert telephone notification system, posted information on its website and sent letters to irrigation canal customers.

"Adjustments have also been made to the agency's extensive treated water system to reduce usage system-wide," said Breninger. He emphasized the need for "voluntary water conservation actions by every treated water customer during this emergency."

He concluded, "At the moment, the recent cool and damp weather is working in everyone's favor, but conditions will change as seasonal warming and demands for water pick up. As this occurs, it will become difficult for PCWA to meet every customer's expectations for water until full supplies from PG&E to PCWA returns to normal conditions."

The board thanked the PG&E representatives for their presence and the company's response to the emergency. The board complemented PCWA staff for their swift actions in wake of the emergency.

Status reports about the emergency will be made at each board meeting. The next regular meeting is Thursday, May 5, 2:00 p.m., at the PCWA Business Center, 144 Ferguson Road, Auburn.

Information about the emergency is posted on the agency's website at <a href="mailto:www.pcwa.net">www.pcwa.net</a> or by calling weekdays the PCWA Customer Services Center at (530) 823-4850 or toll-free (800) 464-0030 or by e-mail at <a href="mailto:customerservices@pcwa.net">customerservices@pcwa.net</a>



I44 Ferguson Road

MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE 530.823.4860 530.823.4960 - fax

#### **NEWS RELEASE**

April 29, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

#### **FOR IMMEDIATE RELEASE:**

## **Conservation Urged**

# Water Shortage Emergency Considered in Placer County

AUBURN – The Placer County Water Agency is preparing to declare a water shortage emergency because its main water supply was severed when a Pacific Gas and Electric Company (PG&E) canal failed. General Manager David A. Breninger called this "a dire, catastrophic situation."

He said, "Staff is doing everything we can to strive to keep water flowing to our tens of thousands of customers with the very limited supplies available to us since Apr. 19 when the PG&E's Bear River Canal failed." The canal is the main water supply to PCWA and its customers.

Breninger said, "I'm extremely disappointed that more than 10 days after the incident PG&E has not been able to provide a realistic timetable for an emergency water bypass or a permanent repair to assure the prompt return of water supplies to PCWA for our customers."

Meeting in special session late Thursday afternoon (Apr. 28), the PCWA Board of Directors set a public hearing for Tuesday, May 10, to further review the situation and to consider an emergency water shortage declaration. The public hearing is set for 5:30 p.m. at the Holiday Inn conference room, 120 Grass Valley Highway, in Auburn.

PG&E representatives said, at the April 28 Board meeting, that the repair is a top priority but the site remains unstable and unsafe for workers. "It's very difficult," said PG&E partnership coordinator Kevin Goishi. "We're talking about a very substantial structure on a landslide. The subsurface conditions are unknown."

PG&E has reviewed the site and is studying all options for a temporary bypass and permanent solution. Goishi said he is hopeful PG&E will be able to provide more information in coming days.

The slide that severed the canal is in a remote, rugged area near Colfax. At the time of the break, the canal was flowing at about 400 cubic feet of water per second (cfs). The supply is normally shared between PCWA and Nevada Irrigation District for their customers in Placer County.

"Normally up to 244 cfs of water would be flowing to PCWA, but now there is absolutely none," said Breninger.

Adjoining water utilities immediately responded to PCWA's call for help on April 19 by providing what they can of limited supplemental supplies to the Agency. "But this won't be enough water as the weather heats up and the demand for water increases," Breninger said. "All PCWA irrigation and treated water customers are asked to conserve now what limited water is available." Breninger expects in the weeks ahead the agency to face "extremely serious shortages and probably won't be able to meet many customers' water needs."

"Basically without a massive infusion of water very soon from PG&E to PCWA thousands of our customers face a stark reality of little to no water in certain regions of our vast service area," added Breninger.

Serious impacts are anticipated to irrigation water customers who use canal water along the Interstate-80 corridor from Christian Valley, Bowman, north Auburn, City of Auburn, Shirland Tract, Ophir and Newcastle. The agency supplies nearly 4000 canal water customers. Rolling canal outages began in many areas at the first reports of the PG&E canal's failure that severed all supplies to PCWA.

Agency officials expressed extremely serious concern for all of their customers.

PCWA directors noticed the irony of the situation, an inability to provide enough water following one of the wettest winters on record. "There's water everywhere but we can't get to it," said District 2 Director Alex Ferreira. "We're in a terrible position."

Information about the emergency is posted on the agency's website at <a href="https://www.pcwa.net">www.pcwa.net</a> or by calling weekdays the PCWA Customer Services Center at (530) 823-4850 or toll-free (800) 464-0030 or by e-mail at <a href="mailto:customerservices@pcwa.net">customerservices@pcwa.net</a>.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER
144 Ferguson Road
MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

May 4, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

#### FOR IMMEDIATE RELEASE:

# **Conservation Urged**

# PCWA Faces Emergency; Pushes PG&E for Canal Repair

AUBURN – "Crisis management is in full swing at the Placer County Water Agency, where the agency's primary supply of water remains severed two weeks after an Apr. 19 failure of the Pacific Gas and Electric Company's Bear River Canal," said PCWA Chairman Lowell Jarvis.

The canal conveys water to PCWA Zone 1 customers. The supply serves a huge area including Auburn, Newcastle, Loomis Basin, Rocklin, Lincoln and other communities and farms. The PCWA Board of Directors met in special session Tuesday afternoon (May 3) for another briefing on the situation.

The agency will host a public outreach and informational meeting on the water crisis at 5:30 p.m. today (May 4) and again Thursday (May 5) at 5:30 p.m. (which follows a regularly scheduled 2 p.m. Thursday board meeting). The May 4 and 5 informational meetings will be held at the PCWA Business Center located at 144 Ferguson Road in Auburn.

A water emergency declaration is under consideration for a public hearing at 5:30 p.m. on May 10 at the Gold Country Fairgrounds, Auburn. (In anticipation of a large crowd and parking, the meeting was moved from the Auburn Holiday Inn.) The public hearing on May 10 at the Auburn Fairgrounds will include a public informational session starting at 5:30 p.m. with the Board meeting and hearing to commence at 6:00 p.m.

PCWA General Manager David A. Breninger said, "Currently, the area most impacted is Upper Zone 1 where 50 percent or less of normal supplies are available for our customers." He said, "The situation, unfortunately, will only grow worse as the weather warms and water demands rise."

In a May 2 letter to PG&E's corporate office in San Francisco, Jarvis wrote, "Unless PG&E can provide at least significant amounts of temporary water supplies within days, the damage to PCWA's 150,000 water users, their property, their livelihoods, their businesses and their livestock will be dire if not catastrophic."

An estimated 40-foot section of the Bear River Canal was ruptured when the land beneath it slid down a canyon wall above the Bear River, about 1.5 miles downstream from Rollins Reservoir. At the time, the canal was carrying about 400 cubic feet of water per second (cfs). PCWA is entitled to as much as 244 cfs of the total. "Currently no water is flowing to PCWA from the breached canal which is the cause of the water supply crisis," said Breninger.

Attending the PCWA board meeting was Alvin Thoma, PG&E's director of power generation, who said the company recognizes the urgency of the situation and a rapid repair is a top priority at every level of PG&E management. He said PG&E is mobilized at the site, studying best options for temporary and permanent repairs, and should be able to announce a plan "in a matter of days."

Thoma said a temporary bypass could carry from 150-200 cfs of water. PCWA Director of Strategic Affairs Einar Maisch added that the agency, at minimum, definitely needs at least 80 cfs to get through the coming weeks.

In reports to the board, Breninger and members of his management team reported on system adjustments, rerouting of water supplies, rotating water outages for irrigation water customers, and cooperative efforts with surrounding water suppliers.

Rui Cunha, assistant director for emergency services for Placer County, said the incident could be included in a county emergency declaration. Brad Harris, division chief for CALFIRE, said firefighters are concerned about wildland and residential fires that could occur during a water shortage. A preliminary estimate given at the meeting indicated initial Placer County agriculture could face \$10 million in losses due to an extended water shortage.

Short of a rapid solution, PCWA customers may face voluntary to mandatory water restrictions. Rotating outages already have been implemented on the most seriously impacted irrigation customers, those on canals in the greater Auburn to Newcastle areas.

"PCWA is asking all customers to conserve water now," said Breninger.

"We're asking our customers for their continued support, understanding and conservation during this time of crisis," said Jarvis.

The PCWA website (<u>www.pcwa.net</u>) is being updated daily on the water shortage emergency and includes outage information and maps of affected areas. Customers may also call the PCWA Customer Services Center at (530) 823-4850 or toll-free (800) 464-0030.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER
144 Ferguson Road
MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE 530.823.4860 530.823.4960 - fax WWW.PCWA.NET

#### **NEWS RELEASE**

May 6, 2011

Contact: David A. Breninger, (530) 823-4850

or: Dave Carter, (530) 265-NEWS

#### **FOR IMMEDIATE RELEASE:**

AUBURN -- Financial assistance program funds were approved as grants to four community water purveyors in Placer County Thursday (May 5) by the Placer County Water Agency Board of Directors.

This year fifteen applications were received from nine public water entities for projects totaling \$336,100. The program has eligibility criteria and a screening committee which reviews and makes recommendations to the board. The program has funds for 2011 of \$35,000.

The 2011 grants include:

- \$10,000 to the Christian Valley Community Services District to complete a site study for a new water storage tank.
- \$5,000 to the Foresthill Public Utility District for a water rights investigation and analysis.
- \$10,000 to the Heather Glen Community Services District for a water storage tank site study.
- \$10,000 to the Squaw Valley Public Service District to provide emergency backup power during electrical outages at the district's East Pump Station.

Since 1993, PCWA has approved more than \$1.5 million in funding to local public water entities in Placer County under the program.

In other business, PCWA directors:

- extended for one year a pilot program that allows housing developers to use a payment plan to pay the Water Connection Charge (WCC) for new water services.
- approved a cost sharing agreement with the Nevada Irrigation District to jointly fund an update of a watershed sanitary survey for the Yuba and Bear river watersheds. The agencies are required by state law to update their surveys every five years. PCWA has budgeted \$50,000 to the effort.
- Congratulated the agency's new Director of Customer Services Matt Young, whose promotion was announced by General Manager David A. Breninger. Young succeeds former director John Kingsbury who left the agency earlier this year when he was selected as executive director of the Mountain Counties Water Resources Assoc. Young joined PCWA a year ago as Deputy Director of Customer Services after serving as assistant customer services manager for the City of Provo, Utah. He holds BS and MPA degrees from Brigham Young University (BYU).

"Matt has distinguished himself during his tenure with the agency and he stood out among the 135 candidates who applied for the position. I'm pleased to have him lead our Customer Services department," said Breninger.

The PCWA board will next meet in a Special Meeting to conduct a public hearing on the current water shortage emergency crisis facing the agency and its customers. The meeting will be held in Placer Hall at the Gold Country Fairgrounds, 1273 High Street, in Auburn. It opens at 5:30 p.m. with public information with agency staff; the board convenes at 6 p.m. with public hearing to follow. The public is invited and encouraged to attend.

The next regular meeting of the PCWA Board of Directors will be held at 2 p.m. on Thursday, May 19, at the PCWA Business Center, 144 Ferguson Road, in Auburn.

Information on PCWA board meetings may be obtained through the Clerk to the Board at (530) 823-4850 or (800) 464-0030.



144 Ferguson Road

MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

May 6, 2011

Contact: David A. Breninger, (530) 823-4850

or: Dave Carter, (530) 265-NEWS

#### FOR IMMEDIATE RELEASE:

#### **Conservation Urged**

## **PCWA Declares Water Emergency**

AUBURN -- A water shortage emergency was declared by the Directors of the Placer County Water Agency on Thursday (May 5) due to the Apr. 19 failure of the Pacific Gas and Electric Company's Bear River Canal that severed water supplies to PCWA for its customers.

"A water supply crisis exists for all PCWA water customers across western Placer County. I ask that everyone reduce, conserve and use as little water as possible and to use it wisely as every drop counts until this crisis ends," said Lowell Jarvis, board Chairman.

The emergency declaration followed agency and PG&E staff reports on the status of conditions, the severity of impacts upon all PCWA customers and PG&E's needs to pursue emergency canal repairs. Also, Thursday, PG&E officials asked the agency's board for the declaration to support expediting permitting and other approvals needed for rapid repairs by PG&E.

"Since the PG&E canal failure," said David A. Breninger, General Manager, "the agency has focused upon keeping together a 'patch quilt' pattern of very limited emergency water supplies to try to service as many of our customers as long as possible with some water. We've had to reroute supplies and collaborate in innovative

ways with nearby water districts and cities for help."

"Now we need a strong spirit of individual cooperation and community support by all PCWA water customers to immediately and drastically reduce water use," said Breninger.

The impacts of the shortage are significant and remain acute for irrigation customers served along the agency's 165 mile canal system serving 4,000 accounts. Irrigation customers along many canals are now or will be facing rolling water outages and delivery restrictions until the crisis passes.

"The many canals serving the greater Auburn to Newcastle areas and along Auburn-Folsom Road are currently the most severely impacted. PCWA has only one third supplies to meet these needs," said Breninger.

And, in far western Placer County, no water is available at all from PCWA for farmers located west of Lincoln.

Treated water customers, numbering 32,500 accounts serving 150,000 people are asked to immediately use the absolute least amount of water possible indoors and out.

"Outdoor residential watering is the largest use of treated water and I ask everyone to dramatically curtail that use now," said Breninger.

Specific actions needed during the water crisis:

- Only water outdoor landscaping, grass and yards three (3) days a week and reduce watering times.
- Water outside only between sunset and sunrise. No daytime watering.
- Addresses ending in an odd digit: water only outside on Wednesday, Friday and Sunday nights to sunrise.
- Addresses ending in an even digit: water only outside on Tuesday, Thursday and Saturday nights to sunrise.
- Do not wash down driveways, sidewalks or parking lots at any time.

PCWA will hold a special board meeting with public hearing at 6:00 p.m. on Tuesday (May 10) at the Gold Country Fairgrounds, Maurine Dobbas Placer Hall, 1273

-more-

High Street, Auburn. The session begins at 5:30 p.m. with agency staff available with information to respond to questions. The Board will convene in special session and public hearing at 6:00 p.m. The agency invites the public to attend. Following the hearing, the board will consider adopting regulations and restrictions on the delivery and use of water.

The PCWA website is updated daily with the latest on the water crisis, water conservation, and other information. Customers may go to <a href="https://www.pcwa.net">www.pcwa.net</a> or call the PCWA Customer Services Center at (530) 823-4850 or toll-free (800) 464-0030.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER
144 Ferguson Road
MAIL

530.823.4860 530.823.4960 - fax

PHONE

#### **NEWS RELEASE**

May 11, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

#### **FOR IMMEDIATE RELEASE:**

## **Conservation Urged**

**PCWA Declares Water Emergency** 

Water Users: Reduce Usage by 25 Percent or More

AUBURN -- Directors of the Placer County Water Agency on Tuesday (May 10) declared a water shortage emergency and asked that all water users reduce their water use by 25 percent or more until the emergency ends.

It is expected to be in mid-June (or later) until normal flows of water return to PCWA for its customers. Both irrigation canal customers and treated water customers are asked immediately to significantly reduce their water use. "With community support of a 25-percent or more reduction in water use, I think we'll be able to get through this," said PCWA General Manager David Breninger.

The Board's action followed a public hearing that attracted about 170 people to Placer Hall at the Gold Country Fairgrounds. PCWA had moved the meeting to the fairgrounds to accommodate a large crowd.

The agency's response and public concern are a result of the April 19th failure of the Pacific Gas and Electric Company's Bear River Canal. A section of the canal slid down a steep canyon wall above the Bear River when the earth beneath the canal gave way.

The incident cut off the main source of water to 150,000 water users of PCWA in areas from Auburn to Loomis, Rocklin and Lincoln.

PG&E, which has mounted a massive restoration effort at the site, is now estimating

that full water delivery may be available by mid-June. Until Tuesday, the company had been estimating a late June completion.

Mike Jones, PG&E's acting vice president for power generation, said the schedule has been moved up because of the good progress made on the repairs. Crews have been working around the clock. He offered special thanks to nearby property owners and the City of Colfax for putting up with the "24/7 construction schedule."

Jones also announced that PG&E had offered up to \$1.8 million to PCWA and the Nevada Irrigation District to help compensate for the electrical energy they have consumed in pumping alternate water supplies to customers.

Fourteen members of the public, mostly agricultural water users, addressed the Board during the public hearing portion of the meeting. Concerns included potential losses of income, crops and pasture. Several speakers said they could endure rotating outages, but low levels in some canals, especially near the ends of canals, have not delivered enough water.

Board Chairman Lowell Jarvis encouraged everyone in the audience to do his or her part. "We can conserve, and we'll get through this together," he said.

PCWA directors will review the emergency situation at each of their meetings until the water shortage is over and the water shortage emergency declaration can be rescinded.

## Conservation Measures to Follow How You Can Help Save Water

PCWA is conducting a wide public outreach effort that includes letters this week to its 37,000 customer accounts.

All customers using piped and treated drinking water and those using irrigation water from the canal system are urged to conserve water by 25 percent or more.

These are some of the primary conservation measures called for in the PCWA water shortage declaration:

#### **Treated Water**

- Customers are requested to reduce use by 25 percent
- Outdoor irrigation only on Tuesdays, Thursdays and Saturdays for those with evennumbered (last digit) street addresses
- Outdoor irrigation only on Wednesdays, Fridays and Saturdays for those with oddnumbered addresses
- No outdoor irrigation on Mondays
- Numerous other conservation methods (see <u>www.pcwa.net</u>)

#### **Canal Water**

- PCWA will reduce the size of orifices in canal water boxes in Zones 1 and 3, placing
  priority for public health and safety reasons on preserving adequate flows in canals
  that supply water treatment plants. Reductions will allow 50-75 percent of normal
  summer deliveries or 1/2 miners' inch, whichever is larger.
- Rotating outages on canals will continue as needed
- PCWA canal operators will closely monitor canal flows and maintain communication with Customer Services personnel responsible for providing canal flow information to customers.
- Canal water customers who inform the agency they wish to forego this year's water purchase for the duration of the water shortage emergency will not lose entitlements or face charges for turning service off and on.

The PCWA website is being updated daily with outage information, maps of affected areas and helpful hints for saving water. Customers are encouraged to stay up to date at <a href="https://www.pcwa.net">www.pcwa.net</a>. The PCWA Customer Services Center may be reached at (530) 823-4850 or toll-free (800) 464-0030.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER
144 Ferguson Road
MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

May 20, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

#### **FOR IMMEDIATE RELEASE:**

#### Conservation Urged

Water Emergency Continues in Placer
PCWA Customers Asked to Reduce Usage by 25 Percent

AUBURN -- The PCWA water shortage emergency in western Placer County is expected to continue until mid-June, it was reported at Thursday's (May 19) meeting of the Placer County Water Agency Board of Directors.

The water agency has been proactively managing the water shortage emergency in wake of the Apr. 19 sudden failure of the Pacific Gas and Electric Company's Bear River Canal. A landslide took out a section of the canal (which is located above the Bear River canyon about a mile south of Rollins Reservoir and a mile west of Colfax.)

When this occurred, water supplies ceased flowing to PCWA. The Agency and its customers are heavily dependent upon this supply as are approximately 150,000 people. PCWA had to immediately devise and implement numerous alternatives for securing temporary water supplies and enact bold water conservation reduction actions.

PG&E spokesman Brian Jensen said, at the board meeting, the company is making very good progress in repairing the canal and expects to have normal deliveries restored by mid-June to PCWA.

Meanwhile, he said, the company has begun pumping a small amount of water from the Bear River into the PG&E canal (downstream from the break) for PCWA's use.

The company also has plans, he said, for a second temporary water supply that may be flowing by the first of June to PCWA.

In the meantime PG&E has also been trucking water to PCWA's Lake Arthur and to other locations to supplement agency supplies. (PG&E has initiated a livestock watering program coordinated with Placer County Resource Conservation District.) The trucks have delivered more than 3.1 million gallons of water to date, Jensen said.

The agency is also relying on many other alternate sources of water from neighboring water entities. PCWA is also pumping water from the American River to supplement supplies for the duration of the emergency.

PCWA has instituted a wide range of water shortage emergency management actions since April 19. Staff also enacted an aggressive customer outreach program since the day of the emergency. These include direct mail to all customers, telephone and e-mail communications, news media coverage, advertising campaigns and presentations at governmental, civic and community meetings.

Rocklin Fire Chief Bill Mikesell attended the agency board meeting and said PCWA has done an "outstanding job" in communicating with his department and keeping water available for fire protection purposes.

PCWA General Manager David Breninger said, "With public understanding, a 'patch quilt' pattern of many temporary water supplies that have been pieced together like dominos and aggressive water conservation reduction actions by our customers, I'm hopeful that adequate flows of water can be sustained to serve our customers throughout our vast distribution system until this emergency ends."

PCWA directors will continue to review the status of the situation at each meeting. The board's next regular meeting is scheduled at 2 p.m. on June 2 at the PCWA Business Center, 144 Ferguson Road, in Auburn. Information about PCWA board meetings is available from the Clerk to the Board at (530) 823-4850 or (800) 464-0030.

The PCWA website is updated daily on the water emergency and actions to be taken to reduce water usage. Customers can stay up to date at <a href="www.pcwa.net">www.pcwa.net</a>. The PCWA Customer Services Center may be reached by e-mail at <a href="customerservices@pcwa.net">customerservices@pcwa.net</a> or by calling (530) 823-4850 or toll-free (800) 464-0030.



I44 Ferguson Road

MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE
530.823.4860
530.823.4960 - fax

WWW.PCWA.NET

#### **NEWS RELEASE**

June 3, 2011

Contact: David A. Breninger

(530) 823-4850 Or: Dave Carter (530) 265-NEWS

#### **FOR IMMEDIATE RELEASE:**

### Bear River Canal Flowing Soon PCWA Board Meets Monday to Declare End of Water Emergency Condition

AUBURN -- At Thursday's (June 2) meeting of the Placer County Water Agency Board of Directors, a PG&E official reported the Bear River Canal is in the final stages of repair and staged re-watering should commence within the next few days. This is six weeks after a massive landslide wiped out a section of the PG&E canal near Colfax that serves as the primary water supply to PCWA.

Alvin Thoma, director of power generation for PG&E, told the board that PG&E is performing a final check on the Bear River Canal and water flow will be restored in the next several days with flows ramping up to normal levels during the week of June 6.

Meanwhile, he said, PG&E crews would be at the site for another week or so, completing cleanup and land restoration work following the emergency repair. "We've been working 24/7 and it's taken us six and a half weeks," he said. "It would take three to four months on a normal construction schedule."

PCWA officials expressed relief that the water shortage emergency was not as bad as it might have been. Cool and wet weather over the past several weeks reduced demand, coupled with customers' water conservation efforts, allowed PCWA to spread alternate water supplies to its various service areas.

PCWA directors will meet in adjourned session at 2 p.m. Monday (June 6) to hear a canal break status report and, barring any unforeseen developments, may plan to officially call an end to the water shortage emergency condition.

PG&E has taken steps to ease the financial burdens of the water shortage on PCWA and the neighboring Nevada Irrigation District, which also has been impacted. PG&E has voluntarily set aside up to \$1.8 million to offset additional pumping costs and to reimburse the agency for lost revenue from its billing adjustments to irrigation canal customers who did not receive water during the canal outage.

Members of the board complimented PG&E for its rapid canal restoration efforts and for PG&E's outreach and coordination with PCWA.

District 4 Director Mike Lee said he has seen a bright side of the unfortunate situation. "I think it has increased public awareness and appreciation," he said. "People realize what a valuable resource we have here."

District 2 Director Alex Ferreira said the water is arriving too late for some rice growers in Zone 5 west of Lincoln who have not planted their crop, but that others who have planted and are using groundwater will welcome the more affordable supply.

General Manager David Breninger thanked the agency staff for many long hours spent dealing with the water emergency and PCWA customers who saved water and helped a reduced supply go further.

In a related matter, Breninger said the agency's emergency management during the six-week outage has been documented and will be used as a case study in the current update of its Urban Water Management Plan.

In other business, directors received and filed the 2010 audit of the water agency's financial statements performed by Maze & Associates Accountancy Corp. of Pleasant Hill.

PCWA directors will next meet in adjourned session at 2 p.m. Monday, June 6, at the PCWA Business Center, 144 Ferguson Road, in Auburn. The next regular meeting of the board is scheduled for 2 p.m. on June 16.

Information on PCWA board meetings may be obtained through the Clerk to the Board at (530) 823-4850 or (800) 464-0030.

Information about the Agency is available on the web at www.pcwa.net.

PLACER COUNTY WATER AGENCY SINCE 1957

BUSINESS CENTER

144 Ferguson Road

MAIL

P.O. Box 6570

Auburn, CA 95604

530.823.4860 530.823.4960 - fax

#### **NEWS RELEASE**

June 7, 2011

Contact: David A. Breninger, (530) 823-4860

or: Dave Carter, (530) 265-NEWS

## **FOR IMMEDIATE RELEASE:**

# Water Shortage is Over PCWA Board Declares End of Water Shortage Emergency

AUBURN -- With the recently repaired PG&E Bear River Canal returning to normal operation, the Placer County Water Agency Board of Directors on Monday (June 6) terminated the water shortage emergency.

The board had declared the emergency on May 5 following the April 19 collapse of a section of PG&E's Bear River Canal. The canal failure, caused by a landslide in a steep river canyon near Colfax, cut a primary water supply to PCWA.

PCWA Director of Field Services Mike Nichol said Monday the agency is again receiving deliveries of water from PG&E and water flows are ramping-up in canals throughout PCWA's Western Water System.

Impacts of the water shortage were most apparent for the 3,800 PCWA irrigation canal water customers as reduced deliveries or rolling outages were implemented to equitably spread water throughout the western water system. The water agency, with assistance from other area water suppliers and voluntary customer conservation, was able to maintain uninterrupted water for the treated water customers and fire flows. Placer County Agricultural Commissioner Josh Huntsinger and Placer County Resource Conservation District Manager Rick Gruen attended Monday's adjourned meeting of the board and thanked PCWA for the work it did to limit the impacts on local agriculture.

-more-

Huntsinger said some rice farmers in far western Placer County did not plant this year, beyond that, he had not heard of any serious local crop damage. "The cool, wet weather has been a real godsend," he said. Gruen said the RCD mobilized a livestock water delivery program but did not have to make deliveries.

In declaring the end to the emergency, PCWA directors said no reconnection charges would be imposed for those who voluntarily gave up water supplies, and that 7,000 acre-feet of supplemental water would be available to agricultural growers in Zone 5. The board's resolution also commends PG&E for its rapid repair of the canal.

Directors also voted to accept PG&E's offer to offset PCWA's pumping costs and to reimburse PCWA for lost revenue resulting from customer billings being adjusted for water they did not receive as a result of the Bear River Canal outage. PG&E voluntarily set-aside \$1.8 million to reimburse the agency and the Nevada Irrigation District for emergency pumping and other associated costs resulting from the canal outage.

Directors then approved a motion to direct staff to adjust charges on irrigation canal customers' bills for the days that water was not delivered.

PCWA Director of Financial Services Joseph Parker said the agency is working on a canal by canal formula through which irrigation canal customers would be billed only for the days and amounts of water they received during the emergency water shortage.

District 2 Director Alex Ferreira said Mother Nature caused the canal failure and it was Mother Nature that helped minimize the impact to our customers (with the unseasonable cool, wet weather).

Board Chairman Lowell Jarvis said the emergency situation was not nearly as serious as it could have been due in large part to the unusually wet weather over the past month. He commended PG&E, PCWA staff, neighboring water suppliers and customers who pitched in and reduced their water use.

## Water Shortage Emergency Over, page three

Monday's meeting of the PCWA board was a special adjourned session. The next regular meeting of the board will be held at 2 p.m. on June 16 at the PCWA Business Center, 144 Ferguson Road, in Auburn.

Information on PCWA board meetings may be obtained through the Clerk to the Board at (530) 823-4850 or (800) 464-0030. More information is available at <a href="https://www.pcwa.net">www.pcwa.net</a>.



May 17, 2011

For immediate release RCD: (530) 885-3048 PCWA: (530) 823-4850 PG&E: (415) 973-5930

NID: (530) 273-6185, or Toll-Free from Placer County (800) 222-4102

#### EMERGENCY WATER DELIVERIES SLATED FOR PLACER COUNTY LIVESTOCK

Water for livestock is available through the Temporary Emergency Livestock Water Delivery Program to livestock owners who have lost all or a portion of their raw ditch water due to the Bear River Canal outage.

This short-term relief will have limited capacity to deliver raw water to help meet livestock requirements. It is not intended for other uses such as crop, pasture or garden irrigation.

The program may be able to provide up to a three-day to five-day supply of water for animals, depending on the delivery site and the existing storage capacity. Landowners are encouraged to seek other alternative water supplies, such as wells or ponds, to supplement livestock watering requirements. Large animals require 10-15 gallons of water per day.

The program and the water deliveries are anticipated to continue until the water shortage has been resolved. That is projected to be mid-June when permanent repairs are completed for the Bear River Canal. PG&E has been trucking water from Rollins Reservoir to PCWA's Lake Arthur and other points. On Sunday, May 15, PCWA increased its capability to pump water from the American River into PG&E's South Canal. While not eliminating the shortage, this should increase the supplies available to serve PCWA's irrigation customers west of Newcastle.

Landowners in need of livestock water through this program should contact the Placer County Resource Conservation District. Livestock owners' watering sites must be readily and safely accessible by large water delivery trucks.

The Temporary Emergency Livestock Water Delivery Program is a free service and made possible through a partnership of the Placer County Resource Conservation District, Pacific Gas and Electric Company, the Placer County Agriculture Commissioner's Office, the Placer County Water Agency, the Nevada Irrigation District and the University of California Cooperative Extension Service.

For additional information on the Temporary Emergency Livestock Water Delivery Program, as well as other District programs and services, please call 530-885-3048, or visit the District's website at www.placercountyrcd.org.



PLACER COUNTY WATER AGENCY

SINCE 1957

C All Division

Gray Allen, District I

Alex Ferreira, District 2 Lowell Jarvis, District 3

Mike Lee, District 4

Ben Mavy, District 5

David Breninger, General Manager
Ed Tiedemann, General Counsel

BOARD OF DIRECTORS BUSINESS CENTER

144 Ferguson Road

MAIL

P.O. Box 6570

Auburn, CA 95604

PHONE

530.823.4850

800.464.0030

WWW.PCWA.NET

June 7, 2011

Auburn Journal Editor P.O. Box 5910 Auburn CA 95604

To: All Placer County Water Agency Customers

Re: THANK YOU from PCWA

The failure of the Pacific Gas & Electric Bear River Canal this spring to sustain water supplies to PCWA was a very serious situation for the people of Placer County.

Thankfully with the cooperation of PCWA's customers, neighboring water districts, PCWA staff, the news media, PG&E, and the cool, wet weather, this potentially catastrophic water supply event ultimately had nominal adverse impacts. It was remarkable how we all came together in this time of crisis to sustain water supplies to our tens of thousands of customers spread across a couple hundred miles of PCWA's service area that stretches from Alta to far Western Placer County.

First of all, I thank all of the PCWA customers for their patience and compliance with the agency's water conservation requests. Water conservation actions enabled water supply deliveries to be extended for the greatest number of customers for the longest period of time possible.

Second, I thank the Cities of Roseville and Lincoln, the Cal-American Water Company, the San Juan Water District, the Nevada Irrigation District, the Midway Heights County Water District and others for their quick agreement to make water available along our mutual borders that helped stretch supplies for PCWA to serve other customers' needs.

Auburn Journal Editor Page Two June 7, 2011

Third, I express my gratitude to PG&E, their staff and contractors for their efforts in resolving the water supply emergency for PCWA and our customers. PG&E's staff attended numerous public meeting with PCWA staff to explain the nature of the problem, took seriously the gravity of the consequences of the water supply outage, and responded with swift action to replace the missing portion of the Bear River Canal. PG&E also trucked over 3 million gallons of water into the PCWA service area, installed a bypass pipe to deliver 30 cubic feet per second (CFS) through the repair construction site, pumped approximately 9 CFS from the Bear River for delivery in Placer County. They worked expeditiously with the Federal Energy Regulatory Commission to receive approvals for project reconstruction and other Bear River Canal system reoperations. In addition, PG&E has pledged financial assistance to PCWA to help mitigate some of the financial burdens that arose from the interruption of water supply deliveries from the Bear River Canal to PCWA and our customers.

Fourth, the water agency asked for and received help from the Auburn Journal, Gold Country Media, and Auburn's radio station KAHI, AM-950, to immediately and continually get the word out to the public about the water supply shortage. Articles and advertisements in the Gold Country Media papers and on KAHI informed the public about the incident and the need to conserve water. Special thanks to Bridget Jones at the Journal for her frequent articles and to Barry Stigers at KAHI for his news reports during the water emergency.

Fifth, I express my appreciation to all PCWA staff and the Board of Directors during this extraordinary event, with special recognition to several key PCWA staff which include:

- Mike Nichol, the PCWA Director of Field Services, and his team of canal operators for optimizing, to the best possible extent, deliveries of water to irrigation customers and water plants spread throughout our system.
- Matt Young, the PCWA Director of Customer Services and his team of customer service representatives. The Customer Service staff received a very large volume of calls and patiently worked with customers that had interruptions in their canal water deliveries.
- ✓ Joe Parker, Director of Financial Services, and the Information Technology team created and provided timely and authoritative updates on PCWA's web page (<a href="www.pcwa.net">www.pcwa.net</a>) regarding the water supply emergency. Joe and the Financial Services staff tracked all the unexpected costs and expenses related to this emergency.

Auburn Journal Editor Page Three June 7, 2011

- Einar Maisch, Director of Strategic Affairs, and Brian Martin, Director of Technical Services, with their staffs, played many key roles "behind the scenes" on engineering, mapping and logistical support during the emergency.
- David Breninger, PCWA's General Manager, must be recognized for his extraordinary leadership and management skills. David coordinated all of the numerous activities that were required to prompt a quick resolution to this emergency. A quick resolution had the greatest chance of minimizing the negative impacts associated with this major canal outage and water shortage to our customers. In addition, David and staff attended numerous City, County, Special District, Chamber of Commerce, and other meetings in addition to being always available to the local and regional news media about this emergency. Their coordinated non-stop outreach program enabled PCWA to reach as many people as possible, as quickly as possible, about the Bear River Canal break and the water conservation actions that were necessary to sustain water for fire protection, schools, medical and care facilities, agriculture and the overall health and safety of our customers.
- And, thank God for the rain and cool weather during the emergency!

Finally, on behalf of Placer County Water Agency, THANK YOU to everyone who worked together to help us all achieve success during this water shortage emergency.

Sincerely,

PLACER COUNTY WATER AGENCY

Lowell Jarvis

Chairman, Board of Directors

**General Manager's Status Reports** 

Sent: Tuesday, April 19, 2011 6:58 PM

To: Alex Ferreira; Ben Mavy; Gray Allen; Lowell Jarvis; Mike Lee (work)

**Cc:** Ed Tiedemann; Janet Goldsmith; Ed Horton; Edward Horton (Home); Marie Davis; Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica Penney; Neil Bartlett;

Randy Cox; Steve Jones; Tom Reeves; Tony Firenzi

Subject: Status Report # 1: PG&E Bear River Canal Failure and Impacts to PCWA

Importance: High

April 19, 2011

TO: PCWA Chairman and Board of Directors

FROM: General Manager Cc: names as noted above

RE: Status Report # 1: PG&E Bear River Canal Failure and Impacts to PCWA

This has been a very busy day and the PCWA team rose to the occasion and responded extremely well on all fronts. We are mobilized and will continue to evaluate the impacts of the PG&E Bear River canal failure upon our ability to deliver water to our tens of thousands of customers. Much work and high levels of coordination has been accomplished in very short rapid-fire time by everyone – and I thank them individually and collectively for this! Staff will continue in this mode until water supply conditions from PG&E to PCWA (and our customers) return to normal.

When this situation became known to us, the critical element was to determine all known facts, what implications and actions were needed and to communicate as quickly as possible with our water customers what we knew. This we did. By late morning we knew enough to commence phone calls to as my customers as possible (and this has been and will continue to be an on-going endeavor for the "duration" of this event). The development of an informative news release was seen as essential as well as the placement of information "on" the PCWA web site (at www.pcwa.net, which will be constantly refined and updated for the "duration" of this event as well). By 10am this morning I reached each of you or had left a message about the situation we were facing. Just after 10am I made the first phone contact with the media. Staff held two strategy sessions today. The first was at 10:30am and the second at 3:30pm. Much was accomplished at each session and between each session and after. Shortly after 4pm we finalized and distributed a PCWA news release and not long thereafter we received and immediately distributed a PG&E statement to the news media. (I've included both of these as attachments for your quick and easy reference.) It was very shortly thereafter (and up to until a half hour ago) the media individually contacted us. (I've talked by phone with the Auburn Journal, the Sacramento Bee and radio-KFBK and had visits here at the PCWA Business Center from TV-3 and TV-10 and I emailed radio-KAHI (Auburn's local AM station).

As we close-out this afternoon/evening, much has been done and much more has been "cued-up" by staff to follow up "on" tomorrow (Wednesday) and thereafter to refine what we'll need to be doing to sustain - as best we can - water service supplies to our customers under these circumstances and to keep them informed. Frankly, this situation is likely to continue for some period of time. At this point, we don't know how long we'll be "in" this "emergency mode". I'm hopeful that we'll hear directly from PG&E in the next day or so as to what they believe is their best estimate as to when they will have the

Bear River Canal repaired and back into full service for water supply deliveries to be returned to normal conditions for PCWA and our customers.

Staff will provide a comprehensive overview to the Board on this situation at Thursday afternoon's 2pm Board of Directors meeting.

Further reports on this will follows as conditions warrant.

Please contact me or any member of the team if you need further information or have inquiries.

All for now,

Dave

#### **Bear River Canal Break**

Early on the morning of Tuesday, April 19, 2011, in a remote canyon near Colfax, a slide occurred below a portion of PG&E's Bear River Canal causing part of the canal sidewall to break and divert water from the canal down the steep hill into the Bear River. PG&E is investigating the cause of the slide. The canal system was inspected by foot patrol on April 1. No potential issues were identified at that time. It is not known at this time, if recent heavy rains or another cause may have contributed to the slide.

At the time of the slide, the canal was carrying about 400 cubic feet per second (cfs) of water and it is able to carry as much as 450 cfs. Immediately after the slide, water level alarms along the canal identified a change in water flows downstream of the break, notifying PG&E hydro operators who immediately began to stop the flow of water in the Bear River Canal. PG&E is assessing the best plan on how it can begin making repairs in this remote and rugged area. PG&E biologist will help identify if any ecological impacts may have occurred.

The canal system delivers water from just below Rollins Lake in Nevada County to Folsom Lake, and along the way the water generates hydroelectric power. At numerous locations along the canal, it delivers water to Placer County Water Agency (PCWA) and Nevada Irrigation District (NID). PG&E is working closely with PCWA and NID to keep them apprised of events.

While there are other canal systems that PCWA and NID can utilize to receive some of the usual water deliveries made by the Bear River Canal, not all anticipated water can be delivered while the canal is under repair. PCWA and NID are developing plans to serve their customers during this time, and PG&E is working with them.

Before PG&E can begin to make repairs, it will need to engineer the repair work and get permit approvals from state and federal agencies. PG&E is expediting this process so as to resume water deliveries as soon as possible.

Sent: Friday, April 22, 2011 4:21 PM

To: Alex Ferreira; Ben Mavy; Gray Allen; Lowell Jarvis; Mike Lee (work)

**Cc:** 'Ed Tiedemann'; 'Janet Goldsmith'; Ed Horton; 'Edward Horton (Home)'; Marie Davis; Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica Penney; Neil

Bartlett; Randy Cox; Steve Jones; Tom Reeves; Tony Firenzi; Cheri Sprunck; Dave Carter **Subject:** PCWA Status Report # 2: PG&E Bear River Canal Failure and Impacts to PCWA

April 22, 2011

TO: PCWA Chairman and Board of Directors

FROM: General Manager Cc: names as noted above

RE: PCWA Status Report # 2: PG&E Bear River Canal Failure and Impacts to PCWA

The week has ended about as best it can under the circumstances of rapid mobilization and implemented of strategies and actions to cope with the PG&E Bear River canal failure and resultant instant loss of water supplies to the Agency for our customers.

Staff has done and is doing an outstanding job in response and stabilization of the impacts of this upon the Agency and customers. We are moving to next-steps of pro-active planning and actions.

Yesterday's Board meeting provided you with a comprehensive overview on matters up to that point by staff and PG&E representatives. Today was follow through on all fronts. We held another team strategy meeting this morning. Agency staff will be represented at a PG&E meeting tomorrow (Saturday, April 23) for the latest update and pre-planning strategies by PG&E for the canal's repair and possible thinking about a by-pass pipe(s). (Important note: the value of the by-pass pipe is nice as it helps to re-charge the small reservoirs in the upper most portion of the Zone 1 system which is very important as it gives us "stronger" supply reliability. But, the by-pass does NOT in any way remove the sense of urgency and emergency for PG&E to focus upon the ultimate and permanent repair of the canal and return of full normal supplies to PCWA.) Agency staff next meets for updates and strategies on Monday morning.

Attached are two work products that have been distributed this afternoon: (1) Agency letter mailed to 3,460 Zone 1 irrigation canal customers and (2) Agency news release.

Additionally, I draw to your attention the Agency web site (<u>www.pcwa.net</u>) at the "Home Page". By the end of today it will be updated. This is a task we do daily as information and circumstances warrant.

Further reports on this will follows as needed.

Please contact me or any member of the team if you need further information or have inquiries.

All for now,

Dave

Sent: Friday, April 29, 2011 7:05 PM

To: Lowell Jarvis; Mike Lee (work); 'Ben Mavy'; Alex Ferreira; Gray Allen

**Cc:** Ed Tiedemann; Janet Goldsmith; Cheri Sprunck; Dave Carter; Ed Horton; Edward Horton (Home); Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica

Penney; Neil Bartlett; Randy Cox; Steve Jones; Tom Reeves; Tony Firenzi

Subject: PCWA Status Report # 3: Managing Water Shortage Impacts to Customers

TO: PCWA Board Chairman and members of the Board

FROM: General Manager

RE: PCWA Status Report # 3: Managing Water Shortage Impacts to Customers

A brief update as a follow up on matters since your special Board meeting twenty-four hours ago:

Attached is the news release issued this afternoon. You'll find that it strongly emphasizes the gravity of the water shortage situation faced by the Agency and our customers. In addition to informing our customers via the media with the release, another goal of mine is that - via the media - we might be able to activate PG&E into serious and pro-active constructive action to deliver emergency "by pass" water ASAP for upper Zone 1 and to trigger assertive emphasis for completion of the canal to restore normal water supply flows to the Agency.

Since the news release was issued around 2pm today, several reporters from different media have made follow up contact with me. There should be stories coming out in the Auburn Journal and Sacramento BEE over the weekend. KFBK (Sacramento) and KNCO (Grass Valley/Nevada City and which also "covers" our Zone 3) have called. The various local weekly papers of the Gold Country media will be "picking up" on the Journal's articles (and which by mid-next week will be re-run of AJ articles) and use of some our news release material. The Loomis News Editor called to talk specifically about the details of the situation relevant to the greater Loomis area which is all within lower Zone 1.

The Sacramento BEE reporter, Ed Fletcher, called back about an hour ago. His article will likely be in the BEE tomorrow. We are working with him for a development of a "newspaper-appropriate" map which we'll look to have developed perhaps on Monday that the BEE and other media can utilize as a "visual" for their stories. In Ed's first call, both Lowell and I talked with him and in Ed's second call Matt and I spoke with him.

I've received a call from TV-13 and will drop by my office in a half hour or so to "do" a story about the outage situation.

[Perspective to share with you: two different reporters told me on the phone this afternoon that when called and talked with PG&E representatives that they too received very little specifics as to when any water (emergency bypass or permanent water) would be flowing to PCWA. Each reporter said in separate phone conversations with me that PG&E would only say that they would have rock and soil samples by early to mid-May. The reporters said that PG&E would not give estimated timeline(s) for when repairs would begin or be completed on the canal or when any water would be flowing back in the canal to PCWA. The reporters separately shared with me that they now clearly understand the frustration we face and the concerns we have for water for our customers.]

In preparation for your Tuesday, May 10, 5:30pm special Board meeting staff will be coordinating with Ed Tiedemann and Janet Goldsmith to have draft resolution(s) available for the Board's consideration for declaring a water shortage emergency.

Other matters that staff is working on: We are refining and preparing maps for customer and media to reference to help them understand the consequences of the impact upon the Agency and customers. The maps are similar to those you saw at the meeting yesterday. However, we are adding more detail and color-coding to assist for reference purposes. Great emphasis is being placed upon mapping related to the upper Zone 1 area (as this is our area where we are faced with stark realities of less than 50% water supplies at best). We are preparing appropriate "messaging" for customers in lower Zone 1, upper Zone 1 and Zone 3. We will be updating the web site the first of next week with our latest information and maps.

Today we expanded our customer public outreach program (related to this situation).

- ---We are contacting or responding to invitations to attend various organizations' meetings as a means to brief attendees about the impacts of the water shortage situation. Staff is following up with: County Municipal Advisory Forums/Councils, Auburn Chamber of Commerce's Meddlers' Forum, County Agricultural Commission, Placer Grown, etc.
- ---If you have any organizations to suggest please do so. And, if you have a meeting that you'd like staff to attend with you, please let me know and we'll arrange to do so.
- ---I have had staff initiate and we will be hosting informational meetings with customers about this situation here at the Business Center. Such meetings will have staff on hand to provide a brief presentation or overview, have maps "on the wall" but mostly serve to respond to specific customers' concerns and questions as to "their" specific location that we serve. The first of the informational meetings we have set up will take place on Thursday, May 5 at 5:30pm here at the Business Center (after the Board meeting).

Please contact me at any time if you have questions or need any information.

Dave

Sent: Monday, May 02, 2011 7:06 PM

To: Alex Ferreira; Ben Mavy; Gray Allen; Lowell Jarvis; Mike Lee (work)

**Cc:** Ed Tiedemann; Janet Goldsmith; Ed Horton; Marie Davis; Cheri Sprunck; Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica Penney; Neil Bartlett; Randy Cox;

Steve Jones; Tom Reeves; Tony Firenzi

Subject: PCWA Status Report: Managing Water Emergency Impacts to Customers

TO: PCWA Chairman and Board of Directors

FROM: General Manager

RE: PCWA Status Report: Managing Water Emergency Impacts to Customers

A brief update follows:

Staff continues to respond the irrigation canal customers' questions and concerns.

A special Board meeting is set and noticed for tomorrow afternoon, Tuesday, May 3 at 3pm here at the PCWA Business Center. Staff will provide another briefing on the latest information known to us on this situation. A letter to PG&E from PCWA as completed today strongly expressing the Agency's concerns with the response to date by PG&E and the dire water supply crisis faced by our customers due to the failure of the PG&E canal on April 19.

Late this afternoon, Brian Jensen of PG&E called to discuss the emergency. I emphasized that PCWA expects action by PG&E to quickly address and resolve how to deliver emergency or supplemental water supplies to PCWA and in particular to Upper Zone 1 as it has been two weeks now since their canal failed. And, I emphasized that PG&E representative(s) need to be present and speak at PCWA Board meetings to address the Board's and our customers' growing and serious concerns about the water shortages. Brian and I confirmed that PG&E staff will be here tomorrow afternoon (May 3) for a meeting and their representative(s) will be here for the 3pm Board meeting. Brain also confirmed that representative(s) of PG&E will be at the Thursday, May 5, 2pm Board meeting and the Tuesday, May 10, evening Board meeting.

Tomorrow morning (May 3), PCWA representatives will be at the Board of Supervisors meeting at 9am (under public comment) to brief the Board on the status of the emergency.

Please contact me if you have any questions or need further information.

Dave Breninger

Sent: Saturday, May 14, 2011 9:29 AM

To: 'lowell.jarvis7@gmail.com'; 'ben@mavyinvestments.com'; 'mlee@twelvebridges.com'; 'glallen@surewest.net'; 'auburnravine@wildblue.net'; Joe Parker; Matt Young; Brian Martin; Mike Nichol; Einar Maisch; Brent Smith; Tony Firenzi; Monica Penney; Don Kellner; Tom Reeves; Greg Young; Andy Fecko; Ben Ransom; Harley Lukenbill; 'etiedemann@kmtg.com'; 'jgoldsmith@kmtg.com'; 'frances.francis@spiegelmcd.com'; 'william.huang@spiegelmcd.com'; 'ncnews@sbcglobal.net'; 'ed@hortonfarm.com'; Ed Horton; Marie Davis

Subject: PCWA Water Shortage Emergency Information

Greetings,

A Saturday morning status report.

Water supply and conveyance is "holding up" as well as it can under the circumstances as is staff. And this (yet again) cold weather and hopefully wet weekend is a blessing indeed. And, this is all a very good thing for all PCWA water customers under the emergency circumstances we find ourselves as we soon approach one month into this "situation"!

I'll bring you up to date on our out reach as there is much "happening" in this arena right now.

Staff has attended many meetings, written another news release (actions of the Board's evening May 10 special meeting)updated information, updated (again) our web page on the emergency, drafted/finalized copy for newspaper ad and for direct letters to every PCWA customer, and much more over the past 3 work days. Now some details on a few new items we are "rolling out".

We have added information and re-formatted the Agency web site relevant to the water shortage emergency. We have launched it. I draw it to your attention. You can access it at the link at the very end of my email. Also, you can go to our web site (<a href="www.pcwa.net">www.pcwa.net</a>) and from the Home page is a "button" to 'hit' and you'll be taken directly to it as well. It is a bit of a work-in-progress, but I felt it looked "very good" and best to go "real time" and we'd continue to modify and update with refinements on Monday (when we are back at the office). It is always interesting to see/read from your home computer (or any other non-Agency work location) that which is "on" our PCWA web site as you see/read it from our customers' perspective and need for 'messaging' corrections, continuity adjustments and other fine-tuning stands-out more clearly. Joe has administered our web "emergency page" since we started it. He along with other staff members has kept it "real time" information as quickly as others of us have develop the materials.

On our PCWA "emergency page" I had Joe include a P G and E link. To access it from our page, go to the section entitled "PG&E General Information" and from there 'hit' the "Link to PG&E Updates". The most recent posting (May 13) at their Update is a brief video with Mike Jones that is nicely done both visually and 'messaging'. PG&E has done and is doing a fine job with their Updates and I draw them to your attention. Also, our PG&E colleagues are working hand in hand with Agency staff on addressing and resolving the emergency as well - I'm very pleased with this progress.

When you are 'surfing' our emergency page (or any other pages on our web site) please forward any suggested changes to Joe and me and we'll look into it right away. By the way, when you are at the emergency page, it is worth the time to re-read in chronological order our many news releases - begin

with the first that I issued on Apl 19 ("the" day of the canal failure). It is amazing what the Board and staff has had to address and to accomplish - to date - and all within less than a month.

The past 3 days, Matt, Joe and I focused upon and spent a massive amount of time in drafting the Agency's "messaging" package for the next phase of the emergency. (The web page update plays a critically important key role in my next phase - I want to continue to refer customers to it for the latest information and details in addition to contacting staff.)

In the past few days we wrote and formatted a full page newspaper ad and also letters to be mailed to all Agency water customers.

The ad will appear in the Auburn Journal, Colfax Record, Loomis News and Rocklin-Placer Herald. The Journal ad is scheduled to run tomorrow (Sunday May 15), next Wednesday (May 18) and Fri/Sat (May 27). Also the ad will appear in the papers (Colfax, Loomis and Rocklin) when they are delivered which is next Wed/Thur. We'll be repeating this again the following week(s).

A 2-page letter (printed back-to-back so it is on a single sheet of paper) is finalized and off to the printers. The first batch is for all 32,500 of our retail Agency treated water customers. On Monday these will be placed into envelopes, first-class stamped and taken to the Post Office for distribution. We have called ahead so they 'know we are coming' with a huge batch of letters so they can manage-the-load and not swamp the mail system. We also have a letter for our 4,000 irrigation canal customers that will be mailed as well.

On Monday, I'll be emailing to all of you a copy of the ad and the letters for your information and for your use as "messaging" examples (plus our web site) when meeting with customers and civic leaders.

As I type this from my home I continue to be impressed with the amazing commitment and fortitude of the men and women of PCWA who work to champion this emergency for the benefit of our customers - please thank them every opportunity you have as this is very hard work and we with no provision what so ever for error under these conditions. 150,000 people of some 36,500 accounts depend totally upon our success!

Thank you,

David A. Breninger (Sent Via Blackberry) Wk # 530.823.4860

Wk Email: dbreninger@pcwa.net

---- Original Message -----

From: David Breninger [mailto:dbreninger@surewest.net]

Sent: Saturday, May 14, 2011 07:58 AM

To: Dave Breninger

Subject: Placer County Water Agency | Bear River Canal Outage

PCWA web site:

http://www.pcwa.net/level2/water shortage.html

Sent: Friday, May 20, 2011 3:09 PM

To: Alex Ferreira; Ben Mavy; Gray Allen; Lowell Jarvis; Mike Lee (work)

Cc: Marie Davis; Janet Goldsmith; Ed Horton; Cheri Sprunck; Ed Tiedemann; Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica Penney; Neil Bartlett; Randy Cox;

Steve Jones; Tom Reeves; Tony Firenzi

Subject: PCWA Water Shortage Emergency - Update

Greetings,

PCWA Update: Water Shortage Emergency

Yesterday's Board meeting provided a comprehensive update on this topic. What follows are a few of the activities of today - an extremely busy one at that!

A key component today has been working on "messaging" for the next round of this emergency. Today this includes a news release, June/July water customer newsletter copy, upcoming advertising campaign copy, updating our web on this situation, responding to the media, responding to specific customer's needs and concerns as a result of this emergency, etc.

Among some of the other details we've been attending to lately has been personal outreach to the other water utilities. And, in this regard and as an example, is the attachment that I draw to your attention. It is a letter sent by Brian to seven water utilities in zone 3 service area. The first two pages is Brian's letter and a list of the names to whom the letter was sent is found on page 3 of the attached.

Another attachment is a photo from PG&E on the status of the Bear River Canal's repair. The photo isn't dated and is one taken yesterday or Wednesday would be my best guess.

Please contact me at any time if you need further information, have questions or suggestions.

All for now,

Dave



**Sent:** Wednesday, June 01, 2011 3:32 PM

**To:** Dave Carter; Marie Davis; Janet Goldsmith; Ed Horton; Cheri Sprunck; Ed Tiedemann; Alex Ferreira; Ben Mavy; Gray Allen; Lowell Jarvis; Mike Lee (work); Andy Fecko; Ben Ransom; Brent Smith; Brian Martin; Bryant Newcomb; Dave Kephart; Einar Maisch; Greg Young; Harley Lukenbill; Jay Correa; Joe Parker; Jon Mattson; Matt Young; Mike Nichol; Monica Penney; Neil Bartlett; Randy Cox; Steve Jones;

Tom Reeves; Tony Firenzi

Subject: June 1 Status Report: PCWA Water Shortage Emergency

Greetings,

Status report of June 1, 3pm: PG&E's Bear River Canal repair work is moving along very quickly now. Also, the water flows through the temporary by-pass pipe have been going very nicely (with upwards of 50 cfs). This along with the very cool and wet weather as well as reduced water use by customers has allowed the canal system to recover nicely since this past weekend. However, some Agency canals have the reduced orifices installed for the purpose to assure adequate water delivery to the various water plants in Zone 3 and Upper Zone 1 and to assure equity in deliveries to irrigation customers along these key canals. With the unusual cool and wet weather we have had and are expected to continue to have into the coming weekend, PG&E is moving forward tomorrow (June 2) morning to remove the temporary by-pass pipe in order to then commence low to moderate water flows through the entire Bear River Canal. Water itself (perhaps a few hundred cfs) is expected to then begin flowing "in" the Bear River Canal system starting some time Friday. Flows thereafter will be slowly ramped up according to approvals authorized by FERC. PG&E believes that by the end of the weekend or by early next week, normal water deliveries should be flowing via the Bear River Canal to PCWA/NID.

In anticipation of the above, staff has begun preparing for returning the canal system to normal condition status as "firm" supplies are restored to PCWA. It is most likely that a special Board meeting could be held on Monday (June 6) or shortly thereafter for the Board to consider a resolution to end the emergency.

The above and other details will be covered at the Board meeting tomorrow (June 2) afternoon. Please contact me if you have any questions or need clarifications.

All for now and thank you,

Dave

## THIS PAGE INTENTIONALLY LEFT BLANK

**Director of Field Services' Status Reports** 

Sent: Sunday, May 01, 2011 3:52 PM

To: Dave Breninger; Matt Young; Harley Lukenbill; Brian Martin; Dave Kephart; Brent Smith; Einar Maisch; Joe Parker; Tony Firenzi; Don Kellner; Tom Reeves; 'ed@hortonfarm.com'; Ed Horton;

'etiedemann@kmtg.com'; 'jgoldsmith@kmtg.com'

Subject: Tomorrow's Meeting

#### Greetings,

Here is a heads up on what Dave, Randy, Don, Jamie and I worked on today:

#### Status of Lower Zone 1:

We started transitioning to using Roseville's system on Friday, by lowering the water level in the Tinker road tank. We should be in the neighborhood of receiving 5.5 cfs. We are using what we have available. Next we will add water from San Juan and the Lincoln wells as system demands increase.

After that we will start rotating outages in lower zone 1 to save approximately 10-15 cfs.

By May 10th we anticipate having 25 cfs to add to the South Canal due to the new bypass that we are fabricating. This will give us options to decrease something listed in this section until demands peak. We anticipate that these actions will meet demands.

#### Status of Upper Zone 1 Fed from Rock Creek:

Currently we have a rolling, alternating day outage for the Banvard system fed with one pump alternating with the Boardman System fed with two pumps. The max in the Banvard side will reach 12.5 cfs and the max in the Boardman side is about 21.8. When we exceed these latter numbers, we will split the Boardman side in half and make it a three day rolling outage (water in every three days).

#### Status of Upper Zone 1 Fed from Zone 3:

Once demand at the combined Auburn Bowman Treatment Plants reach 11 or 12, the Freeman, Shockley and Auburn Pipe will be out of water.

Prior to that we need to reorifice the canals indicated on the diagram I will present on Monday to either winter flows or .5 cfs for those who don't purchase winter water.

Conservation in Zone 3 can directly benefit both of these areas. IF we can get 2 cfs in conservation from Zone 3 (2 of 18 cfs = 11%). We can keep the Freeman, Shockley and Auburn pipe in service. Of particular interest are Meadow Vista's parks, Colfax High School's fields, and Midway Heights Water District.

Any additional treated water conservation helps our overall effort to serve our customers.

We have current demands (since 1/1/11) and last year's demands for Auburn/Bowman and Foothill Water Treatment Plant.

Just for us, internally we have demand plotted against supply for upper Z1 and Lower Z1 to give an idea of timing (which depends primarily on weather).

I have diagrams of how we will move water through the areas, with quantities.

See you in the morning, Mike

Sent: Thursday, May 12, 2011 5:27 PM

To: Dave Breninger; Brian Martin; Einar Maisch; Ed Horton; Joe Parker; Matt Young; Brent Smith; Dave

Kephart; Don Kellner; Dave Kephart; Tony Firenzi; Greg Young

Subject: Fwd: FERC Approval

Good news from Kevin. Mike

Sent from my Verizon Wireless 4GLTE smartphone

---- Forwarded message -----

From: "Goishi, Kevin" <KHG1@pge.com>

To: "Tony Firenzi" <tfrinzie@pcwa.net>, "Don Kellner" <dkellner@pcwa.net>, "Brian Martin" <BMartin@pcwa.net>, "Mike Nichol" <mnichol@pcwa.net>

Cc: "Williams, Bill (Hydro)" <WHW2@pge.com>, "Bennett, Stephen (Hydro)" <SMB7@pge.com>

Subject: FERC Approval

Date: Thu, May 12, 2011 5:22 pm

ALL:

I was just informed verbally that FERC approved the construction plans for Ophir. Please coordinate with Bill Williams on your construction activities that affect the South Canal and to plan and schedule the start up procedure.

In addition to the Ophir work, FERC approved PG&E's construction on the flume and the new Bear River pump. I understand that the Bear River pump could be ready to pump as early as Saturday. Our projected late completion is Monday. I'd stay in touch with Wise to see when the pump will be starting up. It is unclear when the water will show up at Rock Creek or how much will make it there. This also assumes that the canal maintenance work that is planned downstream of the pump is completed Friday as planned.

Thanks,

KEVIN H. GOISHI

Sent: Friday, May 13, 2011 8:59 AM To: Cam Rawlings; Brian Martin

Cc: Dave Kephart; Heidi Vaughn; Tony Firenzi; Brent Smith Subject: RE: PG&E OUTAGE, OHIR EMERGENCY PIPING

Don's people are prepping today, shooting on Saturday, and we can start running more water on Sunday morning if you have someone to operate the pumps.

If my math is right on the pumps, we are anticipating double lifting about 98 which would allow us to cycle pumps, give 45 cfs to foothill (they are at 38), leaving 53 for raw water customers. This would allow us to leave the Boardman system on, the Dutch ravine canal on, and alternate between the Caperton and the Antelope.

Thanks, Mike

----Original Message-----From: Cam Rawlings

Sent: Friday, May 13, 2011 7:54 AM

To: Brian Martin

Cc: Dave Kephart; Heidi Vaughn; Mike Nichol; Tony Firenzi; Brent Smith

Subject: PG&E OUTAGE, OHIR EMERGENCY PIPING

#### Brian,

Just wanted to give you a quick update on Ophir Rd pump station. We will be done with the piping this morning and plan on test running pumps 1-4 this afternoon, around 1:00, into the equalization basin. Don Kellner's crews will be working on the discharge structure at the canal and thinks that it will be ready by Monday. When the discharge structure is completed we will disconnect the bypass piping for pumps 5 and 6 so that we can send that water into the equalization basin also. I'll be sending more pic's of the completed piping this afternoon.

Please call if you need more info.

Thanks,

Cam

**Sent:** Tuesday, May 31, 2011 10:04 AM

To: Dave Breninger; Brian Martin; Joe Parker; Matt Young; Einar Maisch; Ed Horton; Brent Smith; Tony

Firenzi; Andy Fecko; Ben Ransom; Don Kellner; Dave Thompson; Laurie Kellner

Subject: PG&E Outage Update: Great News

#### Greetings,

I just spoke with Kevin Goishi, who gave me some tentative update information based on a proposal that PG&E is giving to FERC today. Kevin stressed that the following is tentative, and is offered for our planning purposes only. It is not for public distribution yet.

PG&E is asking FERC's approval of two items today, with FERC's answer anticipated by tomorrow. If the answer comes back positive, PG&E will start returning water to the system on Friday, with full flows anticipated by this Sunday. PG&E will let us hear something more formally that we can share publically tomorrow or the next day.

#### Specifics:

<u>Slide area repairs</u>: Two of five rock bolts are installed, and the others are having some troubles (the holes are caving in, meaning they will have to drill slightly larger holes, grout them with a weak grout, then drill through the weak grout). PG&E is asking FERC if they will allow water to be restored in the canal with the two bolts in place. PG&E plans to continue their efforts to install the three remaining bolts now. The last two concrete wall sections will be poured tonight.

<u>Krause Flume area repairs</u>: 28 of the 35 holes are completed (hole drilled, with steel beam concreted in place). They continue to work on the remaining holes, and will then do the tie backs which haven't been started yet. PG&E is asking FERC to allow full water flows to be restored prior to the remaining holes being completed or the tiebacks being installed.

Sent: Thursday, June 02, 2011 11:21 AM

To: Dave Breninger; Matt Young; Brian Martin; Joe Parker; Einar Maisch; Ed Horton; Brent Smith; Tony

Firenzi; Don Kellner; Dave Thompson; Laurie Kellner; Andy Fecko; Monica Penney

Subject: FW: BRC Released for Normal Operation

#### Greetings,

This is the news we have been waiting for. We are looking at how soon we can make reliable deliveries to Zone 5. We have started reorificing those customers that had reduced flows.

Note that in addition to The attached email, Don was called by Operations staff at Wise powerhouse, and I was called by Dave Ward.

Thanks,

Mike

From: Williams, Bill (Hydro) [mailto:WHW2@pge.com]

Sent: Thursday, June 02, 2011 11:12 AM

To: Bennett, Stephen (Hydro); Murray, Scott; Leung, Ken; McManus, Robert; Sue Sindt;

hart@nid.dst.ca.us; Mike Nichol; Don Kellner; Rowland, Keith; Ward, David M (hydro); Robinson, Michael;

Brewster, Christopher; Covich, Tyler

Cc: PG O&M Wise Ph Ops; PG O&M Drum Ph Ops; Lindblom, Kelly J

Subject: BRC Released for Normal Operation

AII;

FERC has given approval to return the Bear River Canal to normal operation. We are a little behind our schedule this morning due to the delay, but there is a very good chance we will be back on schedule by tomorrow morning.

Attached is a slightly revised Operations Plan, from the one routed yesterday. The significant change is that we will bring down 200 cfs, following the Bear River ramping rates, and then hold the 200 cfs through the weekend. We will look to increase on Monday. With the weather coming in and the current water demands this seems the best plan.

Thanks; Bill Williams

## BEAR RIVER CANAL BREAK

## RETURN TO SERVICE OPERATING PLAN

### Wednesday, 6/1/2011

- John Canavan Reports On the Bear River Canal, for a limited flow of 80 cfs (Switch Log WI-11-0246)
- 1300 Bill Williams Reports Off the Bear River Canal, for a limited flow of 80 cfs (Switch Log WI-11-0246)

#### Thursday, 6/2/2011

- O000 Scott Bigley on site at YB-50 in preparation for securing Bear River Canal flow and clearing the Bear River Canal John Canavan Reports On the Bear River Canal, for a limited flow of 80 cfs (Switch Log WI-11-0246)
- John Canavan Reports Off the Bear River Canal, for a limited flow of 80 cfs (Switch Log WI-11-0246)
- 0010 Wise Operator to close YB-50 Cross Gate remotely. Bigley to verify the gate closed and sealed as necessary
- O020 Scott Bigley completes switching to Report Off the limited flow in the Bear River Canal (Switch Log WI-11-0246)
- OO45 Scott Bigley completes clearing the Bear River Canal for removal of the temporary Bypass Pipe (Switch Log WI-11-0249)
- John Canavan walks down and Reports On the Bar River Canal for removal of the temporary Bypass Pipe (Switch Log WI-11-0249)
- O600 Attend tailboard with Syblon-Reid, at the main break site, in preparation for starting removal of the temporary Bypass Pipe
- 0700 Start removal of BRC temporary Bypass Pipe
- 0900 Bigley to regulate to keep MFG (YB-63) supplied during outage (either from Halsey Forebay or PCWA's Lake Arthur)

1000	Remove checks at Ragsdale Diversion (YB-56)
1500	Complete work at Ragsdale Spill Gates and complete testing the operation of the gates
1600	Rick Strickland Reports Off Wise Unit (Switch Log WI-11-0226)

## Friday, 6/3/2011

0530	Complete work to remove BRC temporary Bypass Pipe
0600	Attend tailboard with Syblon-Reid, at the main break site, in preparation for starting flow in the newly repaired (built) canal section
0615	Verify all men and equipment are in the clear and the Bear River Canal clearance is ready to be Reported Off
0630	John Canavan Reports Off the Bear River Canal (Switch Log WI-11-0249)
0630	Wise to support Vaca-Dixon switching at Halsey
0700	Ensure main canal break and Krause II areas will be manned and ready for water
0700	Start flow in the Bear River Canal and establish a flow of 200 cfs
0700	Make Wise Unit available (Switch Log WI-11-0226)
0730	Stone Wise Unit collector rings and reassemble brush rigging assembly

## Friday, 6/3/2011 (Con't)

NOTE:	We will be operating under the Winter Operating Plans when we return, until repairs are complete at the main break site and Krause 2 site
NOTE:	Over the weekend we will be spilling around Halsey
0800	Water Crew to commence walk down of the Bear River Canal to ensure the canal is ready for the flow of bypass water
1200	Verify flows from PCWA into the South Canal are below 100 cfs

1200	Start Wise Unit and complete post outage testing
1400	Load Wise Unit to maintain Rock Creek Reservoir level and meet South Canal demands
1400	PCWA to cease all pumping and overflow operations to the South Canal
1400	Start Wise #2 Unit and complete post outage testing
1500	Regulate YB-259 for 50 CFS for NID demand.
1600	Secure Wise #2 Unit and place in Reserve Shutdown Status
1600	Open YB-292 for normal minimum instream flow requirements (~8 cfs)
1630	Close YB-132 (previously feeding 3.5 cfs into the Auburn Ravine)

## Saturday, 6/4/2011

1300 Water Crew completes walk down of Bear River Canal and Mike Robinson provides update on the Bear River Canal condition

## Sunday, 6/5/2011

1300 Water Crew completes walk down of Bear River Canal and Mike Robinson provides update on the Bear River Canal condition

## Monday, 6/6/2011

0830	Perform Helicopter inspection of the Bear River Canal
0900	Scott Perry Reports Off Halsey Unit (Switch Log WI-11-0225)
0900	Make Halsey Unit available (Switch Log WI-11-0225)
1030	Increase flows in the Bear River Canal to 300 cfs (100 cfs increase)
1100	Start Halsey Unit and complete post outage testing
1700	Engineering, Geosciences and Drum Hydro completes walk down of Bear River Canal and provides guidance on increasing flows in the Bear River Canal. The water need versus weather will be evaluated to determine if BRC flows will be increased further
1830	Load Halsey Unit to maintain Halsey Forebay level

## Tuesday, 6/7/2011

വരവ	Start filling Newcastle Penstock

1900 Complete filling Newcastle Penstock

## Wednesday, 6/8/2011

0900	Clear the Lower Wise Canal to remove checks and PCWA Rock Creek Pumps (Switch Log WI-11-
	xxxx)

- 1000 Complete removal of checks and pumps and Restore the Lower Wise Canal (Switch Log (WI-11xxxx)
- 1100 Start Newcastle Unit

Sent: Wednesday, June 08, 2011 3:41 PM

To: Dave Breninger; Brian Martin; Joe Parker; Einar Maisch; Matt Young; Ed Horton; Brent Smith; Tony

Firenzi; Don Kellner; Tom Reeves; Laurie Kellner; Monica Penney; Dave Kephart; Andy Fecko

**Subject:** FW: SOUTH SUTTER

### More Good News

From: Dave Thompson

Sent: Wednesday, June 08, 2011 3:24 PM

To: Mike Nichol

**Subject:** RE: SOUTH SUTTER

PG&E said they were going to 350 cfs today and 425 cfs tomorrow. Dave

## THIS PAGE INTENTIONALLY LEFT BLANK

## **Notice for Public Hearing**

# NOTICE OF PUBLIC HEARING BEFORE THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY

Hearing on Declaration of Water Shortage Emergency

NOTICE is hereby given that on Tuesday, May 10, 2011, at 5:30 p.m., or as soon thereafter as can be heard, at Auburn Holiday Inn, 120 Grass Valley Highway, Auburn, California, the Board of Directors of the Placer County Water Agency (Agency) will hold a public hearing pursuant to Water Code Sections 350, et seq. to determine whether a water shortage emergency condition prevails within the area served by the Agency.

Consumers of water supplied by the Agency may be heard at said hearing to protest against the declaration of a water shortage emergency and to present their respective needs to the Board of Directors of the Agency.

In the event a water shortage emergency is declared, the Board of Directors of the Agency may (1) adopt such regulations and restrictions on the delivery and consumption of water within its service area, as well in the sound discretion of the Board of Directors, conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection and (2) adopt changes in rates and charges as may be necessary as a result of any such water shortage emergency. Such regulations and restrictions may include the right to deny applications for new or additional water service connections and provide for their enforcement by discontinuing service to consumers willfully violating such regulations and restrictions or by other means.

Dated: April 29, 2011	
•	Cheri Sprunck
	Clerk to the PCWA Board of Directors

## **Board of Directors Resolutions**

## RESOLUTION NO. 11-16 OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY FINDING AND DECLARING A WATER SHORTAGE EMERGENCY CONDITION

WHEREAS, the Placer County Water Agency ("Agency") provides water for residential, commercial, industrial, municipal and resale purposes throughout its Western Water System; and

WHEREAS, water to the Western Water System is normally supplied entirely by Pacific Gas & Electric Company ("PG&E") pursuant to water supply contracts between the Agency and PG&E; and

WHEREAS, water for major portions of the Western Water System is delivered to the Agency by PG&E through its Bear River Canal ("Canal"); and

WHEREAS, on April 19, 2011, PG&E's Canal collapsed and totally failed, resulting in complete loss of the of the 244 cubic feet per second ("cfs") primary water supply normally available to the Agency and its customers from PG&E; and

WHEREAS, PG&E's repair of the Canal and restoration of water deliveries through the Canal is unlikely to be completed before warmer weather and higher water demands completely outstrip currently available replacement supplies that can be obtained by the Agency through its Zone 3 water system, from the American River, and through emergency interties and exchanges with Nevada Irrigation District, the City of Roseville, and San Juan Water District; and

WHEREAS, it is necessary and in the best interests of the Agency's Western Water System and the consumers of water from the water system that measures be instituted to conserve the Agency's water supply during the current failure and interruption of water deliveries from the Bear River Canal to try to ensure that the available water supply is equitably distributed among the Agency's customers and that the needs of human consumption, sanitation and fire protection throughout the Agency's Western Water System service area are met and that canal water customers' needs are met to the extent physically possible.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Placer County Water Agency as follows:

- 1. All of the above recitals are true and correct and this Board so finds and determines.
- 2. For all the reasons set forth in the above recitals, this Board hereby finds and declares that a water shortage emergency condition prevails within the Agency's Western Water System, which emergency condition is caused by the collapse and total failure of the PG&E Bear River Canal.
- 3. The Board further directs staff to work with PG&E to provide whatever assistance may be needed to enable PG&E to obtain the permits necessary to commence repair of the Canal as soon as possible and expeditiously complete repair of the Canal.
- 4. The foregoing resolution was duly passed at an adjourned meeting of the Board of Directors of the Placer County Water Agency held on May 5, 2011, by the following vote on roll call:

AYES DIRECTORS: Gray Allen, Alex Ferreira, Mike Lee, Ben Mavy, Chairman Lowell Jarvis

NOTES DIRECTORS: None

ABSENT DIRECTORS: None

Signed and approved by me after its passage this 5<sup>th</sup> day of May 2011.

Chairman of the Board

Placer County Water Agency

ATTEST:

Clerk, Board of Directors

- 11

970728.1

RESOLUTION NO. 11-17 OF THE BOARD OF DIRECTORS
OF THE PLACER COUNTY WATER AGENCY FINDING AND
DECLARING A WATER SHORTAGE EMERGENCY CONDITION,
ADOPTING REGULATIONS AND RESTRICTIONS ON
DELIVERY AND CONSUMPTION OF WATER AND
AUTHORIZING THE FILING OF A NOTICE OF EXEMPTION

- A. WHEREAS, the Placer County Water Agency ("Agency") provides water for residential, commercial, industrial, irrigation, municipal and resale purposes throughout its Western Water System; and
- **B.** WHEREAS, water to the Western Water System is normally supplied almost entirely by Pacific Gas & Electric Company ("PG&E") pursuant to water supply contracts between the Agency and PG&E; and
- C. WHEREAS, water for major portions of the Western Water System is delivered to the Agency by PG&E through PG&E'S Bear River Canal ("PG&E Canal"); and
- **D.** WHEREAS, on April 19, 2011, PG&E's Canal collapsed and totally failed, resulting in complete loss of the of the 244 cubic feet per second ("cfs") water supply normally available to the Agency and its customers from PG&E; and
- E. WHEREAS, PG&E's repair of the PG&E Canal and restoration of normal water deliveries through the Canal is unlikely to be completed before warmer weather and higher water demands completely outstrip currently available replacement supplies that can be obtained by the Agency through its Zone 3 water system, from the American River, and through emergency interties and exchanges with Nevada Irrigation District, the Cities of Roseville and Lincoln, and San Juan Water District; and
- F. WHEREAS, it is necessary and in the best interests of the Agency's Western Water System and the consumers of water from that water system that measures be instituted to conserve the Agency's water supply during the current failure and interruption of water deliveries from the PG&E Canal to try to ensure that the available water supply is equitably distributed among the Agency's customers throughout the Agency's Western Water System service area; and

- G. WHEREAS, the Agency's ability to supply water to treated water customers from the Western Water System to meet the needs of human consumption, sanitation, fire protection, economic and other purposes is dependent in part on the amount of water that can be delivered to the Christian Valley Park Water Treatment Plant, the Bowman Water Treatment Plant and the Auburn Water Treatment Plant from Zone 3 and in part on the ability of the treated water customers in the Western Water System to reduce their water demand by 25% or more; and
- H. WHEREAS, the loss of water supply from PG&E's Canal has rendered the Agency unable to supply all of the water needs of its water customers who receive untreated water from the Agency's canals ("canal customers"); and
- I. WHEREAS, because of the collapse of the PG&E Bear River Canal and the resulting water shortage emergency the Agency has no water that it can make available to its Zone 5 customers this year;
- J. WHEREAS, to provide at least some water to all canal customers, it is necessary to reduce water deliveries to the Agency's canals in an equitable manner; and
- K. WHEREAS, on May 5, 2011, in light of the foregoing facts, and at the request of PG&E for a declaration of emergency to support its requests for expedited permits and other approvals needed to begin its repair of the Canal, this Board found and declared, by its Resolution 11-16, that a water shortage emergency exists within its Western Water System service area; and
- L. WHEREAS, notice of the time and place of a public hearing on May 10, 2011, by this Board was duly given and published, and at that hearing consumers of the Agency's water supply were given an opportunity to be heard concerning the declaration of water shortage emergency and to present their respective needs for water to the Board, and such public input has been duly received and considered by this Board.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Placer County Water Agency as follows:

1. All of the above recitals are true and correct and this Board so finds and determines.

- 2. For all the reasons set forth in the above recitals, this Board hereby confirms its findings and declaration in Resolution No. 11-16 that a water shortage emergency condition prevails within the Agency's Western Water System as a result of the collapse and total failure of the PG&E Bear River Canal.
- 3. The Board extends its profound gratitude to Nevada Irrigation District, the Cities of Roseville and Lincoln and San Juan Water District for the emergency water supplies which they have so quickly and graciously provided to the Agency to assist in partially meeting water needs of the residents, businesses and water users of Placer County Water Agency and directs the General Manager to convey its thanks to them.
- 4. Due to the loss of supply from the PG&E Canal, no supplemental water exists for distribution and delivery to Zone 5, and the declaration of water availability for Zone 5 provided by the Board at its meeting of April 7, 2011 is hereby rescinded.

#### 5. Treated Water Use

In order to try to ensure the continued dependable supplies of water for public health and safety, including particularly for domestic, sanitation and fire-fighting use, all customers that receive their water supplies from the Agency's Western Water System, including all retail and wholesale customers of both treated and untreated water, are requested to reduce their water consumption by 25% or more by observing at least the following water use practices, and the Agency staff is directed to use all reasonable methods to assist treated water customers in making such reductions:

#### a. Outdoor use of water

- i. Customers with an even-numbered street address should use water outdoors only on Tuesday, Thursday and Saturday.
- ii. Customers with an odd-numbered street address should use water outdoors only on Wednesday, Friday and Sunday.
- iii. Do not use water outdoors on Mondays.
- iv. Water only during early morning or after sunset and avoid watering during daylight hours.

v.	Reset water timers to reduce by 25% the minutes a valve station is operating
	to reduce outdoor irrigation to the extent practicable. Inspect your landscape
	irrigation systems for leaks, adjust spray heads to minimize overspray and
	prevent runoff.

- vi. Non-commercial vehicle washing should be done only by using a bucket and hose with a shutoff nozzle.
- vii. Use a broom or rake to clean streets, sidewalks, parking lots or driveways; do not use water for outdoor cleaning.
- viii. To the extent possible, do not add water to decorative fountains, pools, ponds and decorative waterways and do not refill them until the water shortage emergency is over. Use water recirculation system in all decorative water features.
- ix. If drained, swimming pools should not be refilled.

#### **b.** Indoor Water Use

- i. Run dishwashers and washing machines only when there is a full load.
- ii. Repair toilet leaks and dripping faucets.
- iii. Do not run water needlessly such as when brushing teeth, washing dishes by hand or shaving.
- iv. Limit shower time to five minutes and install low-flow shower heads and faucet aerators.
- v. Never put water down the drain when you can use it for purposes such as watering a plant or garden or cleaning.
- vi. Avoid flushing the toilet unnecessarily. Dispose of facial tissues and other such waste in the trash rather than the toilet.

#### c. Commercial Indoor Water Use.

- i. Serve water to commercial patrons only if expressly requested.
- ii. Observe the practices identified above in (a) and (b) to the extent practicable.

#### d. Resale Water

Staff is directed to contact all resale water suppliers to which the Agency provides water and urge that each request its customers to conserve water and reduce water use by 25% by adhering to the indoor, outdoor, commercial and hydrant water use practices set forth in paragraph 5 of this resolution.

#### e. Hydrant Use

Applications for use of water from public hydrants will be granted subject to limitations of hydrant location and such other conditions as are reasonably necessary to prevent depletion of supplies needed for human consumption, sanitation and fire-fighting purposes.

#### **6.** Canal Water Use

In order to try to ensure the continued dependable supplies of water for public health and safety, including for domestic, sanitation and fire-fighting use, the Agency staff is directed to use all reasonable methods in the operation of the Western Water System, including, but not limited to, changing the sizes of the orifices through which water is delivered to customers and instituting "rolling" or alternating canal outages. Among the steps that the Board hereby specifically authorizes are the following:

- a. Orifices for all canal water customers in Zone 3, and for customers in Zone 1 who take water from canals that deliver water to a water treatment plant must be resized to provide no more than 50% of the customer's summer water delivery rate or ½ miners inch, whichever is greater, provided that, orifices of commercial customers shall be resized to provide 75% of the customer's summer water delivery rate or ½ miners inch whichever is greater, and provided further that orifices that provide wholesale water for treated water systems shall not be resized or reduced. Staff is authorized and directed to implement this orifice resizing as expeditiously as possible.
- b. A variance from the provisions of subparagraph 6(a) above may be granted based upon undue hardship, upon application in writing to the Agency's General Manager or his designee, stating in detail the alleged hardship, and after a finding by the General Manager that such a variance will not prevent the Agency from meeting domestic, sanitation and fire protection needs and is in the public interest. Upon granting any

- such variance, the General Manager may impose such conditions as he determines to be just and proper to protect public health and safety.
- c. A canal water customer whose orifice is not resized will nevertheless be subject to reduced water supplies through rotating canal outages that are intended to stretch the available water supply as far as possible. Depending on weather, the source and availability of water for any given canal, the length of the canal and its diversions and losses, this will mean different scheduled outages for different canals.
  - i. Staff is authorized and directed to rotate the use of the canals in the Agency's canal system to provide water periodically to every canal customer to the extent possible, as frequently as possible.
  - ii. In recognition that the maximum use of available water is achieved when customers know in advance of its availability, staff is directed to inform customers by all reasonable methods available, including by posts on the Agency's website, of the schedule of canal water availability for each canal and a listing of the time when water is released into the head of any given canal.
  - iii. Canal operators are directed to maintain communication with the Customer Service personnel at the Agency's office and to inform them of the time that water is released into each canal, and of any problems that become known impeding the delivery of water in any canal.
  - iv. Water delivery entitlement of any customer who informs the Agency in writing that he or she is willing to forego untreated water delivery for the duration of the Water Shortage Emergency will be preserved, and no fees or charges related to the discontinuance or reinstitution of service, otherwise imposed by Agency Regulations Nos. 40402 or 41305, will be assessed.
- 7. At each meeting of the Board until the Declaration of Water Shortage Emergency is rescinded by the Board, the Board will consider whether additional or mandatory measures must be taken to address the emergency. Staff is directed to agendize and report to the Board at each meeting the status of water supplies, the adequacy of conservation to meet health and safety needs, and to recommend whether additional conservation measures should be requested or required.

# RESOLUTION NO. 11-18 OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY TERMINATING THE WATER SHORTAGE EMERGENCY AND THE REGULATIONS AND RESTRICTIONS ON DELIVERY AND CONSUMPTION OF WATER

- A. WHEREAS, on April 19, 2011, PG&E's Bear River Canal collapsed and totally failed, resulting in complete loss of the of the 244 cubic feet per second ("cfs") water supply from PG&E normally available to the Agency and its Western Water System customers; and
- **B.** WHEREAS, on May 5, 2011 this Board adopted Resolution No. 11-16 declaring that a water shortage emergency conditions then prevailed within the Western Water System; and
- C. WHEREAS, on May 10, 2011, after receiving public comment at a duly noticed public hearing, the Board adopted Resolution No. 11-17 confirming Resolution No.11-16 and imposing regulations and restrictions on the delivery and use of water within the Western Water System, to ensure that the available water supply would be equitably distributed among the Agency's customers throughout the Agency's Western Water System service area; and
- **D. WHEREAS**, as of the date of this Resolution, repair work on the Bear River Canal has progressed to the point that normal operation of the Bear River Canal has been restored,;
- E. WHEREAS, because of the restoration of flow through the PG&E Bear River Canal, the Agency can make available 7,000 acre feet of water to its Zone 5 customers this year;

  NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Placer County Water Agency that
  - The water shortage emergency declared in Resolutions Nos. 11-16 and 11-17, and the
    regulations and restrictions on the delivery and consumption of water set forth in
    Resolution No. 11-17 are hereby terminated. Staff is directed to remove the orifice
    restrictors that were placed on customers' canal apertures pursuant to Resolution 11-17, as
    quickly as practicable.
  - 2. No reconnection charges shall be imposed on those untreated water customers who voluntarily suspended their request for water during the duration of the emergency.

- 3. Priorities for untreated water deliveries for 2012 shall be based on customers' initial requests for service as of March 15, 2011.
- 4. Up to 7,000 acre feet of supplemental water shall be made available for distribution to customers within Zone 5 of the Agency, in accordance with procedures set forth in the Agency's regulations, upon application on a first-come, first-served basis.
- 5. The Board of Directors hereby expresses its appreciation to PG&E for its expeditious repair of the Bear River Canal and restoration of normal water deliveries and directs the General Manager to prepare a letter expressing the Agency's thanks.
- 6. The actions taken hereunder are exempt from the provisions of the California Environmental Quality Act of 1970 in that they constitute response to an emergency, and the General Manager of the Agency is hereby directed to file a Notice of Exemption with the county clerk.

THE FOREGOING RESOLUTION WAS DULY PASSED at an adjourned meeting of the Board of Directors of the Placer County Water Agency held June 6, 2011, by the following vote on roll call:

AYES DIRECTORS: Gray Allen, Alex Ferreira, Mike Lee,

and Chairman Lowell Jarvis

NOES DIRECTORS: None

ABSTAIN DIRECTORS: None

ABSENT DIRECTORS: Ben Mavy

Signed and approved by me after its passage this 6<sup>th</sup> day of June, 2011.

Lowell Jarvis

Chairman, Board of Directors Placer County Water Agency

ATTEST:

Beverly Bell

Acting Clerk, Board of Directors

Placer County Water Agency

## **PG&E Correspondence**



PLACER COUNTY WATER AGENCY

SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

Gray Allen, District 1 144 Ferguson Road

Alex Ferreira, District 2

Lowell Jarvis, District 3

Mike Lee, District 4 Ben Mavy, District 5 P.O. Box 6570 Auburn, CA 95604

David Breninger, General Manager
Ed Tiedemann, General Counsel

PHONE 530.823.4850

800.464.0030 WWW.PCWA.NET

May 2, 2011 File No. 408-1

Michael L. Jones, Power Generation Lead Pacific Gas & Electric Company Mail Code N-11D 245 Market Street San Francisco, CA 94105

SUBJECT:

Pacific Gas and Electric Company's Bear River Canal Failure that Occurred April 19, 2011

Dear Mr. Jones:

Placer County Water Agency (PCWA) customers are in a dire water supply crisis due to the failure of Pacific Gas and Electric Company's (PG&E) Bear River Canal and PG&E's subsequent failure to begin repairs or even to present a plan for a temporary emergency supply in light of the canal failure.

Since April 19, 2011, the date of the failure of PG&E's Bear River Canal, PCWA has been bypassing emergency supplement replacement water from Alta through its Zone 3 canal system to endeavor to provide some of its Zone 1 customers a limited amount of water. In addition, PCWA has been able to supplement its Zone 1 system with other limited emergency supplies from Nevada Irrigation District, cities of Roseville and Lincoln and San Juan Water District. However, without meaningful immediate progress by PG&E to provide PCWA with water, PCWA's ability to meet our customers' water demands is increasingly uncertain as weather continues to warm. Some of PCWA's upper Zone 1 irrigation canal customers face the very real possibility of having no water available in the foreseeable future. And PCWA's farmers in Zone 5, normally supplied with water from PG&E's Yuba-Bear system and from PCWA's American River Pump Station, will be completely deprived of water as those supplies are redirected to partially meet the domestic, municipal, and fire protection needs within Zone 1.

Unless PG&E can provide at least significant amounts of temporary water supplies within days, the damage to PCWA's 150,000 water users, their property, their livelihoods, their businesses and their livestock will be dire if not catastrophic.

It has been two weeks since the failure to this PG&E canal that is the primary conveyance of water to PCWA Zone 1 and thus far PG&E has not provided a plan for either a temporary emergency supply or a permanent repair. This is unacceptable. PCWA demands corrective action by PG&E now.

Your immediate attention is appreciated.

PG&E Bear River Canal Failure May 2, 2011 Page 2

Please contact our General Manager, David Breninger, and me with your immediate action plan to resume water flowing to PCWA that is sufficient to meet our customer's water needs.

Sincerely,

PLACER COUNTY WATER AGENCY

Lowell Jarvis, Chairman Board of Directors

∐:bb

cc: Chris Johns, PG&E

Lee Cox, PG&E

Randy Livingston, PG&E

Kevin Goishi, PG&E

Bill Williams, PG&E

Brian Jensen, PG&E

Congressman Tom McClintock

Senator Barbara Boxer

**Senator Dianne Feinstein** 

**State Senator, Ted Gaines** 

State Assemblyman, Dan Logue

Placer County Board of Supervisors and CEO, Tom Miller

**Nevada Irrigation District Board of Directors** 

Nevada Irrigation District General Manager, Ron Nelson

Ed Tiedemann, PCWA General Counsel

Janet Goldsmith, PCWA General Counsel

Frances Francis, PCWA FERC Legal Counsel

**PCWA Board of Directors** 

PCWA General Manager, David Breninger

Bear River Canal Failure\_PGE 050311.docx



May 3, 2011 File 408-1 PLACER COUNTY WATER AGENCY

SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

David Breninger, General Manager

Ed Tiedemann, General Counsel

Gray Allen, District I 144 Ferguson Road

Alex Ferreira, District 2

Lowell Jarvis, District 3 P.O. Box 6570

Mike Lee, District 4 Auburn, CA 95604

Ben Mavy, District 5 PHONE

530.823.4850 800.464.0030

WWW.PCWA.NET

Michael L. Jones Power Generation Lead Mail Code N-11D 245 Market Street

San Francisco CA 94105

Re:

Bear River Canal Failure - Placer County Water Agency

Public Hearing on Water Emergency Declaration

Dear Mr. Jones:

Placer County Water Agency's Board of Directors has had to take the extraordinary action to notice a special Board meeting and public hearing to consider the adoption of a Declaration of Water Shortage Emergency and water cutbacks to our customers caused by and because of the April 19 failure of your company's Bear River Canal.

Your firm's canal is <u>the</u> primary conveyance of water supplies to PCWA Zone 1. There are 150,000 people and their property, thousands of acres of farm land plus animals, and innumerable schools, colleges, medical facilities and businesses who rely on this water. Additionally, the water supply is critically important to sustain flow for fire hydrants and fire suppression.

It has been two weeks since your canal failed and thus far your firm has not provided a plan for either a viable temporary emergency water supply delivery or a permanent repair for the canal and the return to normal water supply deliveries to PCWA.

The canal is empty. There is no plan. This is unacceptable.

PCWA has had to go to extraordinary means - since the moment of the canal's failure - to find and to deliver what very limited emergency supplement water supplies we can for our customers, including use in Zone 1 of PG&E water provided to our Upper Placer Water System (Zone 3). We assume you agree that water supplied by PG&E under the 1982 Purchase Agreement may be used by the Agency anywhere in its service area for the purpose of alleviating shortages caused by the failure of your canal.

PCWA's customers, Board of Directors, and staff need an informed and authoritative representative from your firm to take command, to make decisions and to immediately resolve this disastrous situation in order to commence water deliveries to PCWA for our customers.

Michael L. Jones Page two May 3, 2011

PCWA Board has set a public hearing on this matter for the evening of May 10 in Auburn. The Board has requested that I extend an invitation for you to attend. Your attendance will allow the public to hear firsthand the most current and accurate account of when water will be flowing to PCWA for our customers. I urge you to attend or that you send an informed and authoritative decision representative of PG&E if you cannot attend.

The public hearing will be held May 10, 2011, at 5:30 p.m. The public hearing was first set for the Holiday Inn, 120 Grass Valley Highway, Auburn. However, we realize attendance will exceed room capacity. Accordingly, the Board will convene the meeting at the Holiday Inn at 5:30 p.m. and recess and adjourn at the Auburn fairgrounds in the Maurine Dobbas Placer Hall, 1273 High Street, Auburn California, 95604-5527.

Please coordinate with David Breninger, General Manager, or Einar Maisch, Director of Strategic Affairs, concerning any needs you may have for making your presentation to the Board of Directors.

Sincerely,

PLACER COUNTY WATER AGENCY

Lowell Jarvis

Chairman, Board of Directors

#### DAB/cls

Chris Johns, PG&E Lee Cox, PG&E Randy Livingston, PG&E Kevin Goishi, PG&E Bill Williams, PG&E Brian Jensen, PG&E Congressman Tom McClintock Senator Barbara Boxer Senator Dianne Feinstein Senator Ted Gaines Assemblyman Dan Logue Tom Miller, CEO, County of Placer Nevada Irrigation District Board of Directors Ron Nelson, General Manager, Nevada Irrigation District Ed Tiedemann, PCWA General Counsel Janet Goldsmith, PCWA General Counsel Frances Francis, PCWA FERC Legal Counsel PCWA Board of Directors David Breninger, PCWA General Manager Einar Maisch, PCWA Director of Strategic Affairs

## FEDERAL ENERGY REGULATORY COMMISSION Office of Energy Projects

Division of Dam Safety and Inspections - San Francisco Regional Office 901 Market Street, Suite 350, San Francisco, California 94103 (415) 369-3300 Office (415) 369-3322 Facsimile

May 6, 2011

In reply, refer to: Project No. 2310-CA

Mr. Randal S. Livingston, Vice President Power Generation, Mail Code N11E Pacific Gas and Electric Company P. O. Box 770000 San Francisco, CA 94177-0001

Re: Bear River Canal Repair Project

Dear Mr. Livingston:

This letter is in response to PG&E's May 5, 2011 letter that requested authorization to begin Phase I of the Bear River Canal Repair Project, part of the Drum Spaulding Project, FERC Project No. 2310. We understand that Phase I of the project will involve extending the existing access road to above the canal, building a pad for concrete handling equipment and the placement of approximately 1500 to 2500 cubic yards of controlled low strength material (CLSM) to fill the washed out area below the canal

You are authorized to start construction of Phase I of the Bear River Canal Repair Project. Phase II of the project will presumably include flume construction and erosion control in the part of the slide area not covered by the CLSM. Plans and specification for Phase II work should be submitted for review. Resumption of canal operation is not authorized by this letter. Once construction is completed, you must request authorization to resume diversion into the Bear River Canal. We have several comments on requirements prior to rewatering the canal which are shown in the Enclosure.

Within 30 days of the date of this letter, please submit a plan and schedule showing completion of response to the attached comments, as well as construction milestones.

During construction, your agency should fully comply with all environmental and safety requirements including use of best practices to prevent pollution, sedimentation,

#### Comments on the Bear River Canal Repair Project Drum-Spaulding Project, FERC Project No. 2310

and erosion. Please note that within 45 days of completion of construction, you are to submit to this office a letter with the following certifications (notarized in accordance with 18CFR Part 12, Paragraph 12.13 of the Commission's Regulations):

- A certification by the Design Engineer that the project was constructed in accordance with the design intent.
- A certification by the Quality Control Manager that the results of the inspection and testing program results in a conclusion that the project was constructed in accordance with the plans and specifications.
- A certification from the Licensee that the construction fulfills the design intent and was constructed in accordance with the plans and specifications reviewed by FERC

If during the design and construction process the plans and specifications are revised, it is your responsibility to assure these changes are properly coordinated between the design engineer, the QCIP manager, FERC, and yourself. Also, if any changes are made that require a change in the operation of the project it is your responsibility to assure these changes are properly coordinated with FERC. You are reminded that no changes to operation of the project can made until authorized by FERC.

We appreciate your cooperation in this aspect of the Commission's Dam Safety Program. If you have any questions, please contact Mr. John Onderdonk at (415) 369-3339.

Sincerely,

Robert B. Finucane, P.E., F. ASCE

Regional Engineer

**Enclosure** 

#### Comments on the Bear River Canal Repair Project Drum-Spaulding Project, FERC Project No. 2310

- 1) A copy of the Streambed Alteration Agreement (SAA) should be submitted to the Regional Engineer as soon as the SAA is obtained.
- A copy of a written statement regarding the cause of the failure shall be submitted to the Regional Engineer as soon as it is submitted to the Central Valley Water Quality Control Board.
- 3) An end-to-end review of the condition of the canal should be performed. A report on the review must be submitted prior to authorization of Phase II of the project and any identified deficiencies should be addressed prior to the resumption of canal operations.
- 4) A plan for the repairs to the section of Bear River Canal showing stress fractures in material adjacent to the canal, (a segment near the Weimar exit of Highway 80,) is due within 2 weeks of the date of this letter. Plans for repairs at this site, must be reviewed and authorized by the Regional Engineer. Remedial construction must be completed prior to the resumption of canal operations.
- 5) An assessment of canal spill gates and alarms upstream of the Station 80+00 canal failure site and upstream of the canal segment near the Weimar exit of Highway 80 should be completed, and the results filed with the Regional Engineer. The assessment should include how far upstream the spill gates are, whether they are automated, and what project operation procedures should be changed to assure that should another failure occur at one of these sites, the quantity of released water would be reduced to a minimum. A report on the assessment must be completed prior to authorization of the resumption of canal operations.
- 6) During construction of the CLSM fill, the work should be closely supervised by the design engineer to determine that actual ground conditions and fill performance are as expected. The engineer's certification that the CLSM fulfills the design intent must be submitted prior to authorization of the resumption of canal operations.
- 7) The grade beam- rock bolts should be designed to ensure that the rock bolts have an adequate factor of safety and that the grade beam is adequate. Ensure the grout is non corrosive; non-shrinking; has wear, scaling, and freeze thaw

## Comments on the Bear River Canal Repair Project Drum-Spaulding Project, FERC Project No. 2310

resistance; and is not permeable. An adequate number of rock bolts should be installed prior to authorization of the resumption of canal operations.

8) Consideration should be given to providing a safe walkway on the outer slope side of the steel flume for future maintenance purposes.

20110511-0323 FERC PDF (Unofficial) 05/06/2011
Document Content(s)
11089269.tif1-4





June 2, 2011

Michael L. Jones
Power Generation

245 Market Street, Room 1107 San Francisco, CA 94105

Mailing Address
Mail Code N11E
P.O. Box 770000
San Francisco, CA 94177

415.973.0629 Internal: 223-0629 Fax: 415.973-5323

Mr. Lowell Jarvis, Chairman Placer County Water Agency P. O. Box 6570 Auburn, CA 95603

Re: Bear River Canal

Dear Mr. Jarvis:

Thank you for your letters dated May 2, 2011 and May 3, 2011. As you know, Pacific Gas and Electric Company (PG&E) has been working to address the concerns raised by Placer County Water Agency (PCWA). Attached is a summary of PG&E's efforts and activities, some of which have been undertaken in cooperation with PCWA, in response to this emergency situation.

While PG&E has not requested PCWA transport PG&E water pursuant to Paragraph 9 of the Zone 3 water supply contract, PG&E agrees that PCWA may move PG&E water available to it in PCWA's Zone 3 into Zone 1 given this emergency situation.

PG&E will adjust the Zone 1 and Zone 3 water billings similar to what is done during normal annual canal outages each fall. PG&E will credit Zone 3 billings for water moved through Zone 3 into Zone 1 during the canal emergency repairs. The PG&E water moved into Zone 1 will be charged at normal Zone 1 rates.

PG&E appreciates the extraordinary circumstances of this event. As a partner and neighbor, PG&E seeks to lessen the financial impact of the canal outage to PCWA and NID customers and has voluntarily set aside up to \$1.8M for this purpose. For PCWA, PG&E is offering to offset PCWA's pumping costs at seven locations identified in Joe Parker's May 10 e-mail to Kevin Goishi (includes pumps at the American River, Ophir, Rock Creek Reservoir, Stoneridge Road, and Tinker Road) and to reimburse PCWA for lost revenue from reduced customer payments adjusted for water they did not receive due to the canal emergency.

Once the canal is restored to normal service and the emergency over, PG&E would like to meet with PCWA and Nevada Irrigation District (NID) to discuss measures to take to lessen customer impact should similar emergencies arise in the future.

Sincerely,

Michael L. Jones

Power Generation Lead

Attachment

cc: Attached List

Mr. David Breninger June 2, 2011 Page 2

cc: Mr. David Breninger General Manager P. O. Box 6570 Auburn, CA 95603

> Board Members C/O Clerk of the Board Placer County Water Agency P. O. Box 6570 Auburn, CA 95603

From: Joe Parker

Sent: Tuesday, May 10, 2011 12:31 PM

To: Goishi, Kevin

Cc: Dave Breninger; Mike Nichol; Brian Martin; Einar Maisch; Ed Horton; Monica Penney

Subject: Energy Costs

Kevin,

Thanks for taking the time to discuss an overview PG&E's \$1.8 million offer to pay pumping costs incurred by PCWA as a result of the Bear River Canal collapse.

Based on our discussion, PG&E used a prior version of our attached daily pumping costs tracking information plus a projection from Engineering at \$1 million per month to determine the \$1.8 million amount. The \$1.8 million includes a projection of the electric used from the PCWA facilities listed on this page and given that the Agency is sending an amount to NID via the Auburn Ravine, PG&E is considering that as a "contribution" to NID. The Agency has incurred and will continue to incur costs in many other areas such as overtime, informational material, etc, which are being tracked. Once the Canal repair is completed, I will total all the costs incurred by the Agency.

I have 3 tripods for your use at tonight's meeting. See you either at 4:00 pm or at the Fairgrounds.

Joe

Required PCWA Energy Costs and Usage at various meter sites to provide water supply as a result of the Bear River Canal collapse. Incident Date: April 19, 2011

					Month to Date			Cumulative	
			April 1 - 18	April 19 - 30	May	June	July	Incident to Date	
				A	В			A+B	
AUB	AUBURN 5207317889 471 MAIDLIDR 1009393875 HB603	Cost	\$1,159.11	\$64,495.82	\$61,862.00			\$126,357.82	
		kWh used	5,712	561,307	480,114			1,041,421	
107	AUBURN 6653482803	Cost	\$1,659.74	\$18,327.29	\$19,299.00			\$37,626.29	
	E8908-1 A#6653482231	kWh used	13,599	130,010	180,288			310,298	
1050	AUBURN 9588588496	Cost	\$128.30	\$39,359.09	\$51,746.00			\$91,105.09	
0001	1 A#9588588619	kWh used	841	276,306	271,519			547,825	
118	ROCKLIN 0435457235 1181 TINKER RD 1003635142	Cost	\$2,904.14	\$1,932.96	\$562.00			\$2,494.96	
	E8933-1 A#0435457705	kWh used	20,837	13,717	2,889			16,606	
ROC	ROCKLIN 4970553835 1201 SCARROROTGH RD 929978	Cost	\$662.77	\$758.04	\$2,735.00			\$3,493.04	
2	E5966-1 A#4848812543	kWh used	5,092	3,003	13,893			16,896	
8 3	AUBURN 8437024699	Cost	\$0.00	\$1,600.00	NA			\$1,600.00	Estimate
SM	SM1063445805 A#8437024810	kWh used	0	8,341	19,105			27,446	
AUI R	AUBURN 8437024938 12250 ROCK CREEK RD ROCK	Cost	\$0.00	\$2,400.00	NA			\$2,400.00	Estimate
5	CREEK RES SM1063447805 A#8437024810	kWh used	0	18,251	3,198			21,449	
	WF233642-001	TOTAL COST	\$6,514.06	\$128,873.20	\$136,204.00	\$0.00	\$0.00	\$265,077.20	
	TOTA	TOTAL kWh USAGE	46,081	1,010,935	971,006	.1	•	1,937,599	
l									

21	\$12,622.72
6	\$15,133.78
12	\$10,739.43
18	\$361.89
ELAPSED DAYS	AVERAGE DAILY COST

#### PG&E - Bear River Canal Break

#### **Summary of Efforts**

#### Public Outreach:

- To date, PG&E has made presentations with PCWA at five meetings of PCWA's Board of Directors and three PCWA public meetings.
- PG&E has made presentations in association with PCWA at two City Council meetings, five Municipal Advisory Council meetings and the Placer County Agriculture Commission meeting. PG&E continues to attend these forums whenever possible.
- PG&E has briefed various local and State elected officials on the situation, often making joint presentations with PCWA. Several officials have toured the canal break site with PG&E personnel.
- PG&E provides frequent updates via PG&E's Currents website, http://www.pgecurrents.com/category/local/. PCWA and NID have links to this website on their webpages which allows their customers to obtain status updates.

#### Construction:

- PG&E completed placing concrete on May 12 to reestablish the bench on the hillside sufficient to construct a concrete flume in place of the damaged canal section and is on track to complete construction of a concrete flume across the breach by the end of this week, well in advance of the mid-June target date. Conditions permitting, construction has been performed 24 hours a day, 7 days a week.
- PG&E completed its inspection of the remainder of the Bear River Canal and has completed the repairs necessary allowing the canal to be returned to normal service.
- At the request of PG&E, FERC expedited approval of all of PG&E's construction plans. Conditions permitting, construction has been performed 24 hours a day, 7 days a week.

#### **Emergency Water Supplies:**

- PG&E has mobilized up to 14 trucks hauling water (up to approximately 380,000 gallons per day) from Rollins Reservoir 12 hours per day, seven days per week to sites directed by PCWA.
- PG&E has completed and made operational a 42" diameter bypass pipe (30-50 cubic feet per second (cfs) of water) through the construction site on May 27, several days in advance of the June 1 target date.
- PG&E obtained FERC and other agency approvals to pump water from the Bear River into the Bear River Canal downstream of the canal break. PG&E designed and mobilized the three tier pump system and as of May 18 began pumping 9 cfs into the canal.

- PG&E and PCWA worked together to develop plans and obtain FERC approval to modify PCWA's Ophir Pump Station facilities to allow it to temporarily increase its capacity to pump into the South Canal. The modifications were completed and on May 18, the modified facility was approved for up to 110 cfs.
- Placer County OES, Placer County Resource Conservation District, PCWA, NID and PG&E jointly initiated the Emergency Temporary Livestock Water Program to deliver water to livestock owners suffering hardship from the canal break. In addition, PG&E through the RCD offered help to those needing water but did not have storage available.

Financial Assistance: PG&E appreciates the extraordinary circumstances of this event. As a partner and neighbor, PG&E seeks to lessen the financial impact of the canal outage to PCWA and NID customers. As such PG&E has voluntarily offered up to \$1.8 million in assistance to PCWA and NID.

- PG&E is offering to offset PCWA's pumping costs at seven locations identified in Joe Parker's May 10 e-mail to Kevin Goishi (includes pumps at the American River, Ophir, Rock Creek Reservoir, Stoneridge Road, and Tinker Road)
- PG&E has offered to reimburse PCWA for lost revenue from reduced customer payments adjusted for water they did not receive due to the canal emergency.

### **Letters Sent to Customers**



May 12, 2011

PLACER COUNTY WATER AGENCY

Gray Allen, District I 144

Alex Ferreira, District 2 MAIL

Lowell Jarvis, District 3 P.O. Box 6570

Mike Lee, District 4

Ben Mavy, District 5

David Breninger, General Manager
Ed Tiedemann, General Counsel

BOARD OF DIRECTORS BUSINESS CENTER

144 Ferguson Road

MAII

P.O. Box 6570 Auburn, CA 95604

PHONE

530.823.4850 800.464.0030

WWW.PCWA.NET

#### **EMERGENCY WATER SHORTAGE – PLEASE, CONSERVE WATER!**

Water supplies to PCWA have become severely limited. We are faced with a water shortage emergency. I ask your help (as I am of all of our customers) to significantly reduce and immediately conserve water.

Please immediately reduce your water use by 25% (or more). When you do use water, please use it very sparingly. For outdoor watering, water only 3 days a week; reduce valve station times by 25% and please do not water on Mondays. Listed below are specific water conservation reductions that I ask you to do immediately. See our website (www.pcwa.net) for more details.

The cause of our emergency: A segment of a PG&E water supply canal that delivers water to PCWA collapsed and water ceased flowing to PCWA. PG&E estimates repairs to the canal may be completed by mid-June. PCWA has limited options. We are pursuing every conceivable means possible to replace and supplement our water supplies. But, we won't have enough unless bold water conservation actions are taken by everyone to "stretch" the limited water supplies available to us until we get through this emergency.

Your PCWA Board of Directors has closely followed this situation. Your Board declared a water shortage emergency on May 10, 2011. They adopted Resolution 11-17. This sets forth a variety of water conservation measures. The goal is to conserve the Agency's limited water supplies to try to ensure that it can be equitably distributed among our customers served by the Agency's western water system.

During the duration of this emergency all customers are requested to immediately reduce their water consumption by 25% (or more) and by observing the following water conservation reduction actions:

#### **Outdoor Water Use**

- Customers with EVEN-numbered street address: water outdoors only on Tuesday, Thursday and Saturday.
- Customers with **ODD-numbered street address: water outdoors only** on **Wednesday, Friday and Sunday.**
- Do not use water outdoors on Mondays.
- Preferably water only during early morning or after sunset. Try to avoid watering during daylight hours.
- Reset water timers to reduce by 25% the minutes a valve station is operating, to reduce outdoor irrigation to the extent practicable. Inspect your landscape irrigation systems for leaks, adjust spray heads to minimize overspray and prevent runoff.

Page 1 of 2 (OVER)

- Non-commercial vehicle washing should be done only by using a bucket and hose with a shutoff nozzle.
- Use a broom or rake to clean streets, sidewalks, parking lots or driveways; do not use water for outdoor cleaning.
- To the extent possible, do not add water to decorative fountains, pools, ponds and decorative waterways and do not refill them until the water shortage emergency is over. Use a water recirculation system in all decorative water features.
- If drained, swimming pools should not be refilled.

#### **Indoor Water Use**

- Run dishwashers and washing machines only when there is a full load.
- Repair toilet leaks and dripping faucets.
- Do not run water needlessly such as when brushing teeth, washing dishes by hand or shaving.
- Limit shower time to five minutes and install low-flow shower heads and faucet aerators.
- Never put water down the drain when you can use it for purposes such as watering a plant or garden or cleaning.
- Avoid flushing the toilet unnecessarily. Dispose of facial tissues and other such waste in the trash rather than the toilet.

I ask all of our commercial customers to implement both outdoor and indoor water uses to the extent practicable.

For further information about our emergency and water conservation actions, I refer you to our website (www.pcwa.net).

Our Customer Service phone lines have been extremely busy during this emergency. You may get a busy signal or have to hold - please be patient. Our employees are there to serve you. I invite you to call during our regular weekday business hours - 9am to 5pm - at (530) 823-4850 or toll-free (800) 464-0030. Also, you can email them at: <a href="mailto:customerServices@pcwa.net">CustomerServices@pcwa.net</a>

I thank you for your cooperation and patience as we all strive to serve you.

Respectfully,

PLACER COUNTY WATER AGENCY

Oit & Brunninger

David A. Breninger General Manager



PLACER COUNTY WATER AGENCY SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

Alex Ferreira, District 2

Lowell Jarvis, District 3 P.O. Box 6570

Mike Lee, District 4 Ben Mavy, District 5

David Breninger, General Manager Ed Tiedemann, General Counsel

Gray Allen, District I 144 Ferguson Road

MAIL Auburn, CA 95604

PHONE

530.823.4850 800.464.0030

WWW.PCWA.NET

May 13, 2011

#### **EMERGENCY WATER SHORTAGE – PLEASE, CONSERVE WATER!**

Water supplies to PCWA have become severely limited. We are faced with a water shortage emergency. I ask your help (as I am of all of our customers) to significantly reduce your water usage.

The cause of the emergency: A segment of a PG&E water supply canal that delivers water to PCWA collapsed and water ceased flowing to PCWA. PG&E estimates repairs to the canal may be completed by mid-June. PCWA has limited options. We are pursuing every conceivable means possible to replace and supplement our water supplies. But we won't have enough unless bold water conservation actions are taken by everyone to "stretch" the limited water supplies available to us until we get through this emergency.

Your PCWA Board of Directors has closely followed this situation. Your Board declared a water shortage emergency on May 10, 2011. They adopted Resolution 11-17 which set forth a variety of water conservation actions. The goal is to conserve the Agency's limited water supplies to try to ensure that it can be equitably distributed among all of our customers served by the Agency's Western Water System.

Until the water shortage emergency ends, the following actions are being taken:

Our irrigation canal that serves your property will experience rolling water outages for the duration of this emergency. These rolling water outages are intended to be similar to our scheduled (non-emergency) maintenance outages that our canal system experiences each Fall. Depending on the weather, the source and availability of water to PCWA for a canal, the length of a canal, and the number of customers along a canal, the schedule for a canal being 'in' or 'out' of water will vary from canal to canal.

The canal that serves your property is located geographically in PCWA's Zone 1. In order to determine our staff's best estimate as to when the canal that serves your property will be 'in' or 'out' of water, please refer to our website (www.pcwa.net). To identify a canal go to our "home"

page, click on "Water Shortage Emergency Information" and then see information and maps under the "Irrigation Canal Water Customer Information" section.

Canal customers may submit in writing, to the General Manager, that they are willing to forego all irrigation canal water delivery for the duration of the emergency. Customers who do so will have their entitlement preserved through the emergency and no fees or charges will be made related to the discontinuance or reinstitution of service.

In closing, I ask that when you do use water to please use it sparingly.

For further information about our emergency and water conservation actions, I refer you to our website (<a href="www.pcwa.net">www.pcwa.net</a>).

Our Customer Service phone lines have been extremely busy during this emergency. You may get a busy signal or have to hold - please be patient. Our employees are there to serve you. I invite you to call during our regular weekday business hours — 9:00 a.m. to 5:00 p.m. - at (530) 823-4850 or toll-free (800) 464-0030. You may also email them at: CustomerServices@pcwa.net

Our answering service also takes calls and messages for us on weekends and overnight at the same phone number.

Thank you for your cooperation and patience as we all strive to serve you.

Respectfully,

PLACER COUNTY WATER AGENCY

David A. Breninger General Manager



PLACER COUNTY WATER AGENCY SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

Gray Allen, District I Alex Ferreira, District 2

Lowell Jarvis, District 3 P.O. Box 6570 Mike Lee, District 4

Ben Mavy, District 5

David Breninger, General Manager Ed Tiedemann, General Counsel

144 Ferguson Road

Auburn, CA 95604

PHONE

530.823.4850 800.464.0030

WWW PCWA NET

May 13, 2011

#### **EMERGENCY WATER SHORTAGE – PLEASE, CONSERVE WATER!**

Water supplies to PCWA have become severely limited. We are faced with a water shortage emergency. I ask your help (as I am of all of our customers) to significantly reduce your water usage.

The cause of the emergency: A segment of a PG&E water supply canal that delivers water to PCWA collapsed and water ceased flowing to PCWA. PG&E estimates repairs to the canal may be completed by mid-June. PCWA has limited options. We are pursuing every conceivable means possible to replace and supplement our water supplies. But we won't have enough unless bold water conservation actions are taken by everyone to "stretch" the limited water supplies available to us until we get through this emergency.

Your PCWA Board of Directors has closely followed this situation. Your Board declared a water shortage emergency on May 10, 2011. They adopted Resolution 11-17 which set forth a variety of water conservation actions. The goal is to conserve the Agency's limited water supplies to try to ensure that it can be equitably distributed among all of our customers served by the Agency's Western Water System.

Until the water shortage emergency ends, the following actions have been taken:

- Commercial Customers: Orifice reduced to 75% of summer water delivery rate or ½ miner's inch, whichever is greater.
- All other customers: orifice reduced to 50% summer water delivery rate or ½ miner's inch, whichever is greater.

A variance from the resizing may be considered based upon undue hardship. Application for a variance must be in writing and sent to the General Manager who has authority to make the final decision and set conditions.

Canal customers may submit in writing, to the General Manager, that they are willing to forego all irrigation canal water delivery for the duration of the emergency. Customers who do so will have their entitlement preserved through the emergency and no fees or charges will be made related to the discontinuance or reinstitution of service.

Our irrigation canal that serves your property will have the orifice reduced for the duration of the emergency. Orifice resizing is intended to help "stretch" the available water supply to as many customers as possible. The canal that serves your property can be easily located on the PCWA website (<a href="www.pcwa.net">www.pcwa.net</a>). To identify a canal go to our "home" page, click on "Water Shortage Emergency Information" and then see information and maps under the "Irrigation Canal Water Customer Information" section.

In closing, I ask that when you do use water to please use it sparingly.

For further information about our emergency and water conservation actions, I refer you to our website (<a href="www.pcwa.net">www.pcwa.net</a>).

Our Customer Service phone lines have been extremely busy during this emergency. You may get a busy signal or have to hold - please be patient. Our employees are there to serve you. I invite you to call during our regular weekday business hours — 9:00 a.m. to 5:00 p.m. - at (530) 823-4850 or toll-free (800) 464-0030. You may also email them at: <a href="mailto:CustomerServices@pcwa.net">CustomerServices@pcwa.net</a>

Our answering service also takes calls and messages for us on weekends and overnight at the same phone number.

Thank you for your cooperation and patience as we all strive to serve you.

Respectfully,

PLACER COUNTY WATER AGENCY

David A. Breninger General Manager May 23, 2011

10 me tomers

Dear

This letter will serve to confirm that your request for 30 acre feet of water for the 2011 summer water season will not be delivered. PCWA's Board of Directors adopted and passed Resolution No. 11-17 on May 10,2011. Article 4 of this resolution states that "Due to the loss of supply from the PG & E canal, no supplemental water exists for distribution and delivery to Zone 5, and the declaration of water availability for Zone 5 provided by the Board at its meeting of April 7, 2011 is hereby rescinded".

Sincerely,

Mult Young
Matt Young

**Director of Customer Services** 



June 06, 2011

PLACER COUNTY WATER AGENCY

SINCE 1957

BOARD OF DIRECTORS BUSINESS CENTER

David Breninger, General Manager

Ed Tiedemann, General Counsel

Gray Allen, District 1 144 Ferguson Road

Alex Ferreira, District 2

Lowell Jarvis, District 3

Mike Lee, District 4

P.O. Box 6570 Auburn, CA 95604

Ben Mavy, District 5 PHONE

530.823.4850

800.464.0030

MAIL

WWW.PCWA.NET

#### Dear

This letter will serve to provide you with P G & E's contact person for any information that you may need for your insurance company related to the Bear River Canal break.

Jon Dailey PG & E Claims Dept. 1030 Detroit Ave. Concord, Ca. 94518

Office: (925) 674-6493 Cell: (925) 787-4159 Fax: (925) 674-6733

## THIS PAGE INTENTIONALLY LEFT BLANK

## **Water Conservation Flyers**

# Emergency Action: PCWA TREATED WATER CUSTOMERS

As a result of the failure of a PG&E canal that is critically important to PCWA and its customers' water supply, PCWA urgently needs your help to conserve water. During this water crisis, the following actions should be taken immediately:

- Reduce your water consumption by 25% or more
- Outdoor watering:
  - Only water 3 days per week:
    - Addresses ending in an odd digit: Wednesday, Friday and Sunday
    - Addresses ending in an even digit: Tuesday, Thursday and Saturday
    - No watering on Monday
  - Water early morning or after sunset and avoid watering during daylight hours
  - Reset and reduce water timers by 25%
  - Inspect and repair entire irrigation system
- Wash vehicles using a bucket and hose with a shutoff nozzle
- Sweep sidewalks and driveways do not use water
- If drained, do not refill swimming pools
- Run dishwashers and washing machines only when there is a full load
- Request restaurants serve water only upon request by a patron
- Please use as little water as necessary and use it wisely

For more information, please visit <a href="www.pcwa.net">www.pcwa.net</a> or call PCWA Customer Service staff at 530.823.4850.

# Emergency Action: PCWA IRRIGATION CANAL WATER CUSTOMERS

As a result of the failure of a PG&E canal that is critically important to PCWA and its customers' water supply, PCWA urgently needs your help to conserve water. During this water crisis, the following actions should be taken immediately:

- ◆ Upper Zone 1 Group 1 Canals
  - Commercial customers: 75% of summer water delivery rate or ½ miner's inch, whichever is greater
  - All other customers: 50% of summer water delivery rate or ½ miner's inch, whichever is greater
- ◆ Upper Zone 1 Groups 2 & 3 Canals
  - Rolling canal water outages, cycled as necessary
- **♦** Lower Zone 1 Canals
  - Rolling canal water outages, cycled on a minimum of a 24 hour basis
- Zone 3 Canals
  - Commercial customers: 75% of summer water delivery rate or ½ miner's inch, whichever is greater
  - All other customers: 50% of summer water delivery rate or ½ miner's inch, whichever is greater
- Zone 5 Canals
  - No water delivery

For more information, please visit <a href="www.pcwa.net">www.pcwa.net</a> or call PCWA Customer Service staff at 530.823.4850.

# Placer County Water Agency Water Shortage Emergency... <u>Is Over!</u> THANK YOU!

To all PCWA water customers: We thank you for your cooperation and support during the recent water shortage emergency.

Water supplies have returned to normal. Repairs were completed by PG&E to their Bear River Canal and normal water flows have returned to PCWA. On June 6, 2011, the PCWA Board of Directors approved Resolution No. 11-18 terminating the water shortage emergency.

Please refer to the Agency's website (www.pcwa.net) for further information or by contacting the Agency by e-mail at CustomerServices@pcwa.net or telephone at (530) 823-4850 or toll-free (800) 464-0030 during business hours.

### Sincerely,

Placer County Water Agency Board of Directors

Lowell Jarvis, District 3, Chairman Mike Lee, District 4, Vice Chairman Gray Allen, District 1 Alex Ferreira, District 2 Ben Mavy, District 5

David A. Breninger, General Manager, and on behalf of all your PCWA employees

WaterEnergyStewardship

### **Public Outreach List**

#### **Scheduled Meetings**

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Sheridan MAC	Debbie Hawkins (530) 889-4010	6/8/2011 (Wednesday) 7:00 PM AgendaSheridan060 811.pdf	Stewart Hall, 6005 Camp Far West Road, Sheridan	Brent Smith or Tony Firenzi		
Ag Tour	Mark White (530) 885-3046 ext#117 pcrcd@sbcglobal.net	6/9/2011 (Thursday) 7:00 AM	McBean Park Pavilion, 65 McBean Park Drive, Lincoln	Mike Nichol		

#### **Potential Meetings**

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Placer County OES	Rui Cunha OES Program Manager (530) 886-5300			Mike Nichol Don Kellner		
Meadow Vista County Water District	Norm Dean (530) 878-0828 nd2mvcwd@sbcglobal.net			Don Kellner		
Weimar Water Company	Gerry LaBudde (916) 773-8100 Gerry.Labudde@stantec.com			Brian Martin		

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Dutch Flat Mutual	Ernie Bullard (530) 389-2409 (916) 625-4100			Don Kellner		
Auburn Recreation District				Andy Fecko		
Colfax Cemetery District	Craig Ballenger, Superintendent/Foreman (530) 346-9577					
Roseville Public Cemetery District	Linda Roberts, Superintendent (916) 783-3131 rpcd@surewest.net					
Placer County Cemetery District #1	Peter Barmettler, District Manager (916) 645-2475 Placercocemdist@sbcglobal.net					
Black Oak Golf Course	2455 Black Oak Road, Auburn, CA 95602					
The Course at Raspberry Hill	14520 Musso Road, Auburn, CA 95603 (530) 878-7818					
Indian Creek Country Club	4487 Barton Road, Loomis, CA 95650 (916) 652-5546					

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
The Ridge Golf Course	2020 Golf Course Road, Auburn, CA 95602 (530) 888-7888					
Sunset Whitney Country Club	4201 Midas Avenue, Rocklin, CA 95677 (916) 624-2610					
Whitney Oaks Golf Club	2305 Clubhouse Drive, Rocklin, CA 95765 (916) 632-8333					
Winchester Country Club	Sugar Pine Road, Meadow Vista, CA 95722 (530) 878-6500					
North Auburn MAC	Ruth Alves (530) 889-4010 ralves@placer.ca.gov Committee Contact: Joann Bates	Next Possible Meeting Dates: June 14, July 12 7:00 PM	Planning Commission Chambers, CDRA Bldg., 3091 County Center Dr, Auburn	Brent Smith		
Rural Lincoln MAC	Ruth Alves (530) 889-4010 ralves@placer.ca.gov	Next Possible Meeting Dates: June 20, July 18 7:00 PM	Mount Pleasant Hall, 3333 Mount Pleasant Road, Lincoln	Brent Smith		
City of Rocklin	Ricky A. Horst City Manager (916) 625-5560 Ricky.horst@rocklin.ca.us	TBD	City Council Chambers, 2 <sup>nd</sup> floor of the Admin. Building, 3970 Rocklin Road	Brian Martin		

#### **Past Meetings**

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
NID/PCWA Water Committee Meeting		4/21/2011	PCWA, American River Room	Dave Breninger, Einar Maisch, Mike Nichol, Andy Fecko, Brian Martin		4/21/11
PG&E		4/23/2011 1:00 PM	SAGE Offices, 4180 Douglas Blvd., Suite 100 Granite Bay CA 95746	Mike Nichol Brian Martin		4/23/11
PG&E		4/26/2011 1:00 PM	11990 Heritage Oaks Plaza, Suite 9, Auburn, Ca.	Mike Nichol Brian Martin Dave Thompson		4/26/11
PCWA/Roseville Water Committee	Ed Kriz City of Roseville	4/27/2011	City of Roseville Roseville City Hall, Hutchison Room, 311 Vernon St	Brian Martin		4/27/11
Board of Supervisors Meeting	Holly Heinzen Assistant County Executive <a href="mailto:hheinzen@placer.ca.gov">hheinzen@placer.ca.gov</a>	5/3/2011 9:00 AM	Domes	Dave Breninger Einar Maisch	Maps on foam board	5/3/11
PCWA Special Board Meeting		5/3/2011 3:00 PM	PCWA American River Room	Directors, Management and all assigned staff		5/3/11
PG&E		5/4/2011 1:00 PM	11990 Heritage Oaks Plaza, Suite 9, Auburn, Ca.	Mike Nichol Brian Martin		5/4/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Meadow Vista MAC	Lisa Buescher (530) 889-4010 Committee Contact: Deborah Gilcrest	5/4/2011 6:00 PM	Placer Hills School, Room #2, Placer Hills Road, Meadow Vista	Brent Smith		5/4/11
Water Shortage Contingency Plan Meeting with Tully and Young		5/4/2011 1:00 PM	PCWA, Rubicon Room	Dave Breninger, Tony Firenzi, Matt Young, Harley Lukenbill		5/4/11
PCWA Community Outreach		5/4/2011 5:30 PM	PCWA American River Room	Management and all assigned staff		5/4/11
PG&E		5/5/2011 1:00 PM	PCWA, Tahoe Room	Dave Breninger, Mike Nichol, Brian Martin, Ed Horton, Joe Parker, Matt Young		5/5/11
Auburn Cemetery	Sue Burkett District Manager (530) 885-5922 aubcemetery@accessbee.com	5/5/2011 9:00 AM	1040 Collins Drive, off Mt. Vernon	Matt Young Brent Smith Mike Nichol		5/5/11
PCWA Community Outreach	, ,	5/5/2011 5:30 PM	PCWA American River Room	Management and all assigned staff		5/5/11
Water Shortage Contingency Plan Review with Tully &Young		5/5/2011 12:00 PM	PCWA, Tahoe Room	Directors, Management and all assigned staff		5/5/11
NID, PCWA, PG&E Meeting		5/6/2011 8:30 AM	PCWA, Tahoe Room	Brian Martin, Tony Firenzi, Dave Breninger, Joe Parker, Andy Fecko		5/6/11

Page **5** of **11** 

<sup>\*\*</sup>Please send any changes or additions to Nicole Snyder, <a href="mailto:nsnyder@pcwa.net">nsnyder@pcwa.net</a> or (530) 823-4801\*\*

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
КАНІ		5/9/2011 7:00 AM		Dave Breninger		5/9/11
Auburn Journal	Tony Harizan Publisher & President of auburn Chamber	5/9/11 (Monday) 11:00 AM		Dave Breninger		5/9/11
City of Auburn	Robert Richardson City Manager (530) 823-4211 x.192 rrichardson@auburn.ca.gov	5/9/2011 (Monday) 6:00 PM Agenda: City of Auburn May 9, 2011 Agenda.pdf	1225 Lincoln Way, Auburn, CA 95603	Dave Breninger		5/9/11
Gold Country Fairgrounds	Donald C. Anderson	5/9/2011 (Monday) 6:30 PM		Dave Breninger Lowell Jarvis		5/9/11
Ag Commission	Josh Huntsinger (530) 889-7372 JHuntsin@placer.ca.gov	5/9/2011 (Monday) 7:00 PM Agenda:  Ag Commission Meeting. 5-9-11.pdf	3091 County Center Drive (Planning Commissions hearing room)	Matt Young, Mike Nichol, Ed Horton	Maps, Pre-Meeting	5/9/11
Auburn Chamber Meddlers Group	Steven Galyardt Vice President & Manager (530) 863-4855 sgalyardt@Community1bank.co m	5/10/2011 (Tuesday) 7:00 AM	Auburn City Hall, 1215 Lincoln Way Auburn	Lowell Jarvis, Matt Young, Brent Smith		5/10/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
PCWA Special Board Meeting		5/10/2011 (Tuesday) 5:30 PM Agenda:	Begin at Auburn's Holiday Inn on Grass Valley Highway and adjourn to Placer Hall, Gold Country Fairgrounds	Directors, Management and all assigned staff		5/10/11
Town of Loomis	Perry Beck Town Manager (916) 652-1840 x15 pbeck@loomis.ca.gov	5/10/2011 (Tuesday) 7:00 PM Agenda: Town of Loomis.May 10 Agenda.pdf	Loomis Train Depot, 5775 Horseshoe Bar Road, Loomis, 95650	Brian Martin		5/10/11
NID Special Meeting	Board Secretary's Office (530) 273-6185	5/11/2011 (Wednesday) 10:00 AM Agenda: NID.5-11-11.pdf	NID Board Room, 1036 West Main Street, Grass Valley	Dave Breninger Mike Nichol		5/11/11
Lincoln Open Space Committee (LOSC)	Paul Denzler Vice-Chair, LOSC pauldenzler@hotmail.com	5/11/2011 (Wednesday) 6:00 PM	Lincoln Twelve Bridges Library, Willow Room	Andy Fecko		5/11/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
City of Colfax	Bruce Kranz City Manager (530) 346-2313 bruce@brucekranz.com colfaxkranz@foothill.net	5/11/2011 7:00 PM Agenda: City of Colfax.5-11-11 Agen	City Hall, 33 S. Main Street, Colfax, CA	Brian Martin		5/11/11
Joint Economic Development and Government Affairs Committees of the Roseville, Rocklin, Lincoln, and Auburn Chambers of Commerce	Kirk Taber (916) 771-6868 kirk@tabercreative.com	5/13/2011 (Friday) 7:30-9:00 AM Agenda: JGRC Agenda for 05 13 Meeting.doc	Hyatt Place Hotel 220 Conference Center Drive Roseville	Dave Breninger	Maps & Photos	5/13/11
Hwy 49 Business Association	Jack Remington (530) 885-7072 iremington@andregg.com	5/17/2011 (Tuesday) 6:00 PM	Don Robinson Sand & Gravel, 2145 Grass Valley Hwy, upstairs meeting room.	Mike Nichol	Tri-pod Maps	5/17/11
Horseshoe Bar MAC	Ruth Alves (530) 889-4010 ralves@placer.ca.gov Committee Contact: Connie Burns	5/17/2011 6:00 PM Agenda: Horseshoe MAC Agenda.5.17.11.pdf	Loomis Library, 6050 Library Drive, Loomis	Brent Smith Brian Martin	Maps and Photo	5/17/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Newcastle/Rocklin/ Gold Hill Cemetery District	Bill Emerson (916) 663-4660 nrgcem@sbcglobal.net			Brent Smith		*Brent spoke with Bill Emerson on 5/17/11 providing him an update. Bill felt a meeting was not necessary at this time.
Weimar/Applegate/ Colfax MAC	Lisa Buescher (530) 889-4010 Committee Contact: Deborah Gilcrest	5/18/2011 (Wednesday) 6:00 PM Agenda: Agenda 5-18-11.WAC MAC.da	Colfax City Hall, 33 South Main Street, Colfax	Brent Smith Matt Young	Maps and Photo	5/18/11
Newcastle/Ophir MAC	Ruth Alves (530) 889-4010 ralves@placer.ca.gov Committee Contact: Norma Milligan	5/19/2011 7:00 PM Agenda: Newcastle MAC May 19, Agenda.pdf	Ophir Elementary School at 1373 Lozanos Road	Brent Smith	Maps and Photo	5/19/11
Lincoln HOST Lions Club	Lion Kris Knutsen, President (916) 645-9006	5/19/2011 7:00 PM	Veterans Memorial Hall, 541 5th. St., Lincoln	Joe Parker, Andy Fecko		5/19/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
PG&E Tour of the Bear River Canal Site		5/23/2011 1:30 PM	Bear River Canal Site	Mike Lee, Lowell Jarvis, Dave Breninger, Joe Parker, Monica Penney, Einar Maisch, Matt Young, Ed Horton, and Mike Nichol		5/23/11
Placer County Association of Realtors		5/24/11 8:30 AM	Rocklin	Einar Maisch		5/24/11
City of Lincoln	Jim Estep City Manager (916) 434-2490 jestep@ci.lincoln.ca.us	5/24/2011 6:00 PM	McBean Park Pavilion, 65 McBean Park Drive, Lincoln	Brian Martin		5/24/11
Penryn MAC	Ruth Alves (530) 889-4010  ralves@placer.ca.gov Com Contact: Delores R. Setters	5/24/2011 7:00 PM	Loomis Veteran's Memorial Hall, 5945 Horseshoe Bar Road, Loomis	Tony Firenzi	Maps and Photo	5/24/11
Placer Group Sierra Club, Monthly General Meeting	Marilyn Jasper mjasper@accessbee.com	5/31/2011 (Tuesday) 7:00 PM	Auburn Public Library 350 Nevada Street	Andy Fecko		5/31/11
PlacerGrown	Jocelyn Maddux (530) 990-2505 im@brandmarketing.com	6/6/2011 (Monday) 5:00 PM	UC Extension Conference Room, 11477 E. Ave., Auburn	Brent Smith		6/6/11

Organization	Contact Information	Meeting Date & Time	Meeting Location	PCWA Representative(s) Assigned to Attend	Presentation Material Needed	Meeting Held On
Western Placer County Fire Chiefs Association	Bill Mikesell (916) 625-5300 bill.mikesell@rocklin.ca.us	6/9/2011 (Thursday) 9:00 AM	Tentative- Maidu Fire Station, Auburn *Call Bill to verify location on June 6 <sup>th</sup>	Brent Smith	Maps and Photo	Brent called Bill Mikesell on 6/7/11- Bill indicated he will report to the Chiefs at this week's meeting that the water emergency is now over

## **PCWA Newspaper Advertisements**

(Advertisements were posted in the Auburn Journal, Colfax Record, Loomis News, and Placer Herald for multiple days)

# Placer County Water Agency Water Shortage Emergency PLEASE CONSERVE WATER!

Water supplies to PCWA have become severely limited. Your immediate help is needed to significantly reduce and conserve water during this emergency.

PCWA buys water supplies delivered via PG&E canals. A segment of a major PG&E supply canal serving PCWA collapsed and water supplies through it ceased flowing to PCWA. PG&E estimates repairs to the canal may be complete by mid-June. PCWA has limited options. We are using every conceivable means possible to replace and supplement our water supplies. But, we won't have enough unless bold water conservation actions are taken by everyone to "stretch" the limited supplies available to us until we get through this emergency.

Numerous conservation actions are listed at PCWA's website - www.pcwa.net

During this water shortage emergency, please implement the following actions immediately:

### **PCWA TREATED WATER CUSTOMERS**

- Reduce your water use by 25% or more
- **Outdoor Water Use:** 
  - Only water 3 days per week:
    - Customers with **EVEN-numbered street address water outdoors only** on **Tuesday, Thursday and Saturday**
    - Customers with **ODD-numbered street address water outdoors only** on **Wednesday, Friday and Sunday**
    - Do not use water outdoors on Mondays
  - Preferably water only during early morning or after sunset and try to avoid watering during daylight hours
  - Reset and reduce water timers by 25%
  - Inspect and repair entire irrigation system
  - Wash vehicles using a bucket and hose with a shut-off nozzle
  - Sweep sidewalks and driveways; do not use water
  - If drained, swimming pools should not be refilled
- Indoor Water Use:
  - Run dishwashers and washing machines only when there is a full load
  - Repair toilet leaks and dripping faucets
  - Do not run water needlessly, such as when brushing teeth, washing dishes by hand or shaving
  - Limit shower time to five minutes and install low-flow shower heads and faucet aerators
  - Never put water down the drain when you can use it for purposes such as watering plants or cleaning
  - Avoid flushing the toilet unnecessarily
- Commercial Customers should implement these practices to the extent practicable

### PCWA IRRIGATION CANAL WATER CUSTOMERS

- Upper Zone 1 Group 1 Canals\*
  - Commercial customers: Reduced to 75% of summer water delivery rate or 1/2 miner's inch, whichever is greater
  - All other customers: Reduced to 50% of summer water delivery rate or 1/2 miner's inch, whichever is greater
- Upper Zone 1 Groups 2 & 3 Canals\*
  - Rolling canal water outages cycled as necessary
- Lower Zone 1 Canals\*
  - Rolling canal water outages, cycled on a minimum of a 24-hour basis
- **Zone 3 Canals\*** 
  - Commercial customers: Reduced to 75 % of summer water delivery rate or 1/2 miner's inch, whichever is greater
  - All other customers: Reduced to 50% of summer water delivery rate or 1/2 miner's inch, whichever is greater
- **Zone 5 Canals** 
  - No water delivery

\*Details of Zones and Canal Groupings are available at <a href="www.pcwa.net">www.pcwa.net</a>

#### Please use as little water as necessary and use it wisely.

Thank you - David A. Breninger, General Manager, Placer County Water Agency Contact PCWA via email at CustomerServices@pcwa.net or by phone at (530) 823-4850 or toll-free (800) 464-0030

**Ø** Water

**3** 

Energy

Stewardship 6



# Placer County Water Agency

# Water Shortage Emergency... <u>Is Over</u>.

# <u>THANK YOU!</u>

To all PCWA water customers: We thank you for your cooperation and support during the recent water shortage emergency.

Water supplies have returned to normal. Repairs were completed by PG&E to their Bear River Canal and normal water flows have returned to PCWA. On June 6, 2011, the PCWA Board of Directors approved Resolution No. 11-18 terminating the water shortage emergency.

Please refer to the Agency's website (<u>www.pcwa.net</u>) for further information or by contacting the Agency by e-mail at <u>CustomerServices@pcwa.net</u> or telephone at (530) 823-4850 or toll-free (800) 464-0030 during business hours.

#### Sincerely, Placer County Water Agency Board of Directors

Lowell Jarvis, District 3, Chairman Mike Lee, District 4, Vice Chairman Gray Allen, District 1 Alex Ferreira, District 2 Ben Mavy, District 5

David A. Breninger, General Manager, and on behalf of your PCWA employees



Water



Energy



Stewardship



## THIS PAGE INTENTIONALLY LEFT BLANK

## **PCWA Website Pages**



About Us
Board of Directors
News
Water Service
Partners
Employment
Contacts
Sitemap

#### Welcome!

#### Online Bill Pay

The water agency encompasses the entire, 1,500- square-mile boundary of Placer County, ranging from the rim of the Sacramento Valley on the west to the Sierra Nevada and Lake Tahoe on the east. PCWA is headquartered in Auburn, the county seat of Placer C ounty, in California's beautiful Gold Country.



Click here for information

Water-Use Efficiency Programs and Rebates

#### NOTICE INVITING BIDS

PURCHASING
Bidder Responsibility - Please read
before looking at open bids.

Intent to Award P-11-03, Computer
Equipment & Software

PCWA Bid Protest and Purchasing Procedures

PUBLIC WORKS None at this time.

#### PUBLICATIONS

» 2011 Budget
» 2009 Comprehensive Annual
Financial Report (CAFR)
» 2008 Comprehensive Annual
Financial Report (CAFR)
» 2007 Comprehensive Annual
Financial Report (CAFR)

» 2006 Comprehensive Annual
 Financial Report (CAFR)
 » American River Pump Station

 » American River Watershed Sanitary

Survey 2008 Update

» (Map)

» East Loomis Canal Efficiency Study
Executive Summary

» Holding Back the Floods -

Improvement Standards Standard Specifications Standard Drawings



<u>STANDARD SPECIFICATION</u> & STANDARD DRAWINGS

#### ENGINEERINGS PROJECTS

Boardman Canal Relocation Project Update

Bowman Canal Replacement Project Update

#### ENVIRONMENTAL DOCS

2010 Urban Water Management Plan Appendices Public Notice

#### MFP FINANCE AUTHORITY

About the Middle Fork Project Finance Authority

**Tentative Meeting Calendar:** August 25, 2011 - 10:00 am

VIEW A CLIP FROM PBS'S CALIFORNIA WATER SERIES WITH HOST HUELL HOWSER

» Low Resolution» High Resolution

TIME

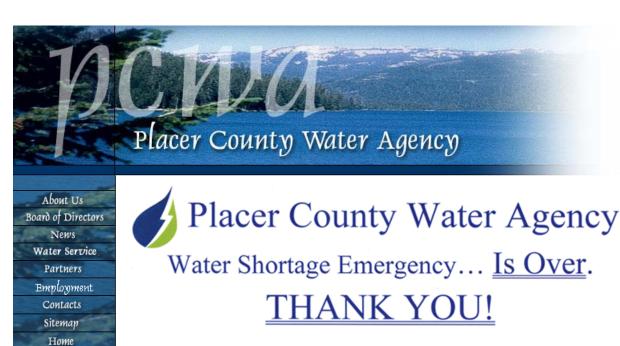
Page 1/68/9f0534

#### LINK

» Middle Fork American River
 Project Relicensing
 » Water-Use Efficiency
 Programs and Rebates
 » French Meadows Spillway
 Modification Project



About Us | Board of Directors | News | Customer Services | Partners | Careers | Contacts | Sitemap



To all PCWA water customers: We thank you for your cooperation and support during the recent water shortage emergency.

Water supplies have returned to normal. Repairs were completed by PG&E to their Bear River Canal and normal water flows have returned to PCWA. On June 6, 2011, the PCWA Board of Directors approved Resolution No. 11-18 terminating the water shortage emergency.

Please refer to the Agency's website (<a href="www.pcwa.net">www.pcwa.net</a>) for further information or by contacting the Agency by e-mail at <a href="www.pcwa.net">CustomerServices@pcwa.net</a> or telephone at (530) 823-4850 or toll-free (800) 464-0030 during business hours.

#### Sincerely, Placer County Water Agency Board of Directors

Lowell Jarvis, District 3, Chairman Mike Lee, District 4, Vice Chairman Gray Allen, District 1 Alex Ferreira, District 2 Ben Mavy, District 5

David A. Breninger, General Manager, and on behalf of your PCWA employees



On April 19th a segment of PG&E's Bear River Canal serving PCWA collapsed and water supplies through it to PCWA ceased. Since April 19, we have used every conceivable means possible to replace and supplement our water supplies to serve you. The unseasonably cool and wet weather over the past several weeks has reduced demands, thus, lessening the impact of the water supply shortage. In addition, your water conservation efforts have helped to "stretch" supplies during this emergency.

At the June 2, 2011 PCWA Board of Directors meeting, PG&E representatives informed the Board that their Bear River Canal is repaired, has received FERC approval and is in normal operation. The water shortage emergency is OVER.

Archived Information

#### ALCHIVEU HIIOTHIAUOH

Treated Water Customer Information	Irrigation Canal Water Customer Information
Thank you for your cooperation and support.	Thank you for your cooperation and support.
<b>Board of Directors Action</b>	> Strategies for Reducing Water Use and Crop
Resolution 11-18 - June 6, 2011 Resolution 11-17 - May 10, 2011 Resolution 11-16 - May 5, 2011	Stress (UCCE)  Daily Water Requirements for Animals – UC Farm Advisory
General Information	Canal System Information & Colored Maps:
News Articles:  > Chairman Jarvis Thank You Article (June 9, 2011)  > End of Water Shortage - Colfax Record (June 9, 2011)  > Newspaper Ad (June 8, 2011)  PCWA Outreach: Radio Ad (First Run May 24, 2011) Newspaper Ad (First Run May 15, 2011)  PCWA News Releases Regarding the Emergency:	Irrigation Canal System Information  Upper Zone 1 Irrigation Canal System Map Lower Zone 1 Irrigation Canal System Map Zone 3 Irrigation Canal System Map
June 7, 2011       May 4, 2011         June 3, 2011       April 29, 2011         May 20, 2011       April 22, 2011         May 11, 2011       April 19, 2011	PG&E General Information  Link to PG&E Updates Photos provided by PG&E

External Links	
For businesses that have been impacted by the water shortage emergency click here for the County's Office of Economic Development.	Soil Moisture Monitoring: Low-Cost Tools and Methods
CIMIS - Resource Center	NRCS Drought Help
University of California Foothill Farming	Estimating Soil Moisture By Feel & Appearance
University of California Irrigation Scheduling	Irrigation: When and How Much









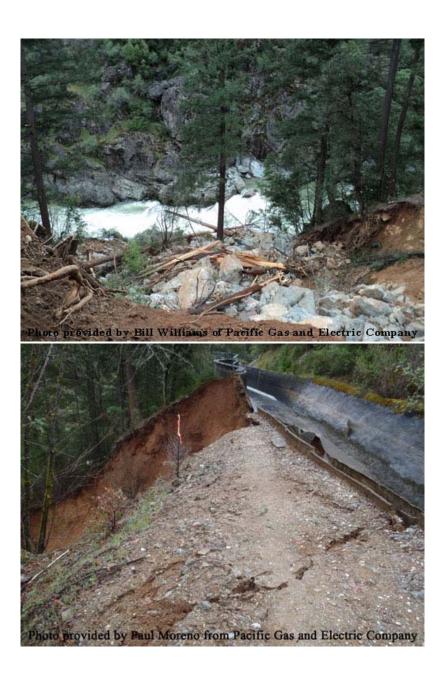




After - PG&E crews have completed pouring concrete to make the hillside stable



Before - The hillside gave way causing the break of the Bear River Canal





News and Perspectives from Pacific Gas and Electric Company June 9, 2011

- Home
- Voices
- Local
- Pipeline Safety
- PG&E Responds

#### Placer County: Bear River Canal Repair Updates

On April 19, in a remote canyon near Colfax in Placer County, a slide occurred on a steep hillside below PG&E's Bear River Canal. The slide caused the sidewall of the canal to break. The canal system delivers water from just below Rollins Lake in Nevada County to Folsom Lake, and along the way the water generates hydroelectric power. At numerous locations along the canal, it delivers water to Placer County Water Agency (PCWA) and Nevada Irrigation District (NID) for homes and businesses, including farms and ranches. PG&E is working on two fronts. It is working with the PCWA to help deliver water to its customers. It also is working quickly to make temporary repairs, to bypass the canal break, as well as to make permanent repairs to the canal.

June 6, 2011

#### Placer County: Bear River Canal Repair Update, June 6, 2011

Final repairs and inspection of the Bear River Canal took place last week, and water began flowing again on June 3.



June 3, 2011

# Placer County: PG&E Completes Repairs to Bear River Canal, Water to Flow Today

Repairs have been completed to the Bear River Canal. PG&E completed repairs on Thursday and got permission from the Federal Energy Regulatory Commission to resume the flow of the water. Water flow was restored at 3 p.m. Friday, and will be gradually increased.

June 2, 2011

#### Bear River Canal Repair Update, June 2, 2011

On Wednesday, members of the media were invited to tour the Bear River Canal where repairs have been ongoing since a landslide in April.



June 1, 201

## **Bear River Canal Repair Update, June 1, 2011**

PG&E continues to make progress as it repairs the Bear River Canal in Placer County. A temporary bypass went into operation on Friday, May 27. Over the Memorial Day weekend, flows through the bypass were increased and now average about 41 cubic feet of water per second (cfs).

May 31, 2011



## Placer County: Bear River Canal Repair Update, May 31, 2011

PG&E continues to make great progress on repairs of the Bear River Canal in Placer County.



May 27, 2011

#### Placer County: Water Starts Flowing Again as PG&E Completes Bear River Canal Bypass

Water is once again flowing through the entirety of the Bear River Canal. A landslide in a remote canyon in Placer County damaged the canal on April 19. Since then, PG&E has worked aggressively to repair the canal.



May 26, 2011

## Placer County: Bear River Canal Repair Update, May 26, 2011

PG&E is completing the final preparations to turn on a temporary bypass of the Bear River Canal in Placer County.

May 25, 2011

#### Placer County: Bear River Canal Repair Update, May 25, 2011

PG&E continues to make progress on repairs to the Bear River Canal in Placer County.



May 24, 2011

# Placer County: Bear River Canal Repair Update, May 24, 2011

PG&E continues to make progress as it works to repair the Bear River Canal in Placer County.



May 23, 201

# Placer County: Bear River Canal Repair Update, May 23, 2011

On Saturday, PG&E poured the fifth bottom section to form the new concrete flume at the Bear River Canal break.



May 20, 2011

## Placer County: Bear River Canal Repair Update, May 20, 2011

On Thursday, PG&E poured 46 yards of concrete to form two bottom flume sections at the Bear River Canal break site.



May 19, 201

## **Bear River Canal Repair Update, May 19, 2011**

PG&E's final canal repairs will begin to take shape today as the company plans to begin pouring concrete into the forms that will create the bottom of the new canal.



May 18, 2011

## **Bear River Canal Repair Update, May 18,** 2011

On Wednesday morning, PG&E began pumping water from the Bear River into the Bear River Canal in Placer County at a site downstream from the landslide area.

May 17, 2011

# Placer County: PG&E, Agencies Start Temporary Emergency Livestock Water Delivery Program

A free program to get water to livestock impacted by the Bear River Canal slide is being launched in a joint effort by PG&E and several agencies.

May 17, 2011

#### Bear River Canal Repair Update, May 17, 2011

Here is the latest news as of Tuesday as PG&E continues to work to make repairs on the Bear River Canal in Placer County.



May 16, 2011

## **Bear River Canal Repair Update, May 16,** 2011

Here is the latest news as of Monday as PG&E continues to work to make repairs on the Bear River Canal in Placer County.



May 13, 2011

## Placer County: Bear River Canal Repair Update, May 13, 2011

Here is the latest news as of Friday morning as PG&E continues to work to make repairs on the Bear River Canal in Placer County.



May 13, 2011

#### **Bear River Canal Repair Project**

PG&E continues to work repair the Bear River Canal in Placer County. The company also is working to deliver water to local agencies for their customers. In this video, Mike Jones of PG&E's power generation department, explains the project.

May 12, 2011

#### Placer County: Bear River Canal Repair Update, May 12, 2011

Here is the latest news as of Thursday morning as PG&E continues to work to make repairs on the Bear River Canal in Placer County.

May 11, 2011

#### Placer County: Bear River Canal Repair Update, May 11, 2011

PG&E continues to work to make repairs on the Bear River Canal in Placer County. The company has said it expects to complete a bypass by the first week of June and full repairs later in June.



May 10, 201

# Placer County: Bear River Canal Repair Update, May 10, 2011

PG&E continues to work to make repairs on the Bear River Canal in Placer County.



May 9, 2011

#### Placer County: PG&E Sends Water Trucks to Ease Bear River Canal Shortage

PG&E was able to deliver 82 loads, or approximately 328,000 gallons of water, to the PCWA yesterday.

"PG&E" refers to Pacific Gas and Electric Company, a subsidiary of PG&E Corporation

© 2011 Pacific Gas and Electric Company. All rights reserved.

- PG&E Home
- Contact Us
- About Us

#### Sign up for our weekly newsletter

Enter Email Address



## THIS PAGE INTENTIONALLY LEFT BLANK

Fire & Water 2011

Many of the reservoirs, canals, pipelines and tunnels that the Placer County Water Agency relies on to provide water service date back to the Gold Rush era. In order to ensure system reliability and meet today's customer needs, PCWA continues to seek out,

in Newcastle, Penryn, Loomis, Rocklin, Lincoln and various other areas during the Bear River Canal water shortage

Up to 80 percent of PCWA's water supply is gravity fed from PG&E's Bear River Canal: however, the canal's collapse



Community members gathered in 2008 for the dedication of the PCWA American River Pump Station. In this year's water shortage emergency, the pump station proved its value as never before.

renew and replace old and outdated facilities and to upgrade infrastructure whenever possible.

In a 10-year effort, completed in 2007, PCWA, in partnership with the U.S. Bureau of Reclamation, built the \$75 million American River Pump Station that pumps water from the American River canyon to Ophir, where it can be supplied to wide areas of western Placer County.

This year, the pump station proved invaluable as it was used to supply almost all PCWA customers with water

severed this supply. PCWA operates a parallel system, the Boardman Canal, which includes canals, tunnels, flumes, and pipelines and runs along the Interstate 80 corridor from Alta to Rocklin and also carrries water to PCWA from the Yuba and Bear River watersheds. Capacity of the Boardman Canal is limited but critically important when the PG&E Bear River Canal is inoperable.

In recent years, PCWA has completed a number of major upgrades to improve the



A section of 54-inch pipe is lowered into place for the Interstate 80 undercrossing on the Secret Town Pipeline

reliability and capacity of the Boardman Canal system. The two largest projects are located above Colfax, where over the past six years the agency has invested \$4.1 million in an upgrade of the Secret Town Pipeline and \$6.4 million to upgrade the Gold Run Pipeline.

Each year, the agency completes a number of smaller canal, pipeline and flume renewals and upgrades. These include the addition of miles of concrete lining to canals to

reduce water loss and improve efficiency These kinds of improvements

are predominantly funded through the agency's Renewal and Replacement Charge, which appears as a line item charge on customers' bimonthly water bills. This charge represents each customer's share in maintaining a safe and reliable water delivery conveyance system to serve PCWA customers both now and for generations to



A section of 36-inch pipe is installed along Gold Run Road as part of the Gold Run Pipeline Project on the Boardman Canal.

# **PCWA's Middle Fork Project**

# Water From the American River Vital in 2011 Water Crisis

Water flowing from PCWA's Middle Fork American River Hydroelectric Project proved to be a vital source during this year's PG&E canal failure that interrupted normal supplies from the Yuba and Bear River watersheds.

PCWA built the Middle Fork Project in 1963-67. The agency constructed a permanent pump station on the American River near Auburn in 2007 to assure a reliable, year-around access to PCWA's American River water rights for its customers.

Middle Fork water is pumped up from the American River canyon through the three-mile-long Auburn Tunnel to Ophir. The water can supply areas from Ophir to Newcastle, Penryn, Loomis, Rocklin, Lincoln and other areas in western Placer County.

"Without this critical piece of infrastructure, many of our treated and raw water customers would have faced severe water shortages during the Bear River Canal emergency," said PCWA General Manager David Breninger. "With the pumps running at full capacity and water reduction actions by the agency and its customers, most of Lower Zone 1 was spared a more difficult situation.'

The Middle Fork Project is owned by PCWA and operated under a 50-year federal power license granted in 1963. (The water agency anticipates a new license in 2013.) "Through its long history, the purpose of the Middle Fork Project has remained the same; to provide the people and lands of Placer County with a reliable water supply, while also generating electricity," Breninger

Through its relicensing application, PCWA is seeking to upgrade and modernize parts of the Middle Fork Project. This will include improved water storage and power production as well as enhancements to the project area watershed and to wildland fire prevention efforts.

Proposed improvements include adding water storage capacity to



Hell Hole Reservoir is situated near the top of PCWA Middle Fork American River Project.

PCWA's Hell Hole Reservoir and more efficient water diversion inlets and outlets at dams and diversion points throughout the project.

"Through relicensing, the agency is working diligently to preserve and protect the American River watershed and to use its water rights to ensure that waters of the American River continue to be available and are put to beneficial use within Placer County," Breninger said.



P.O. Box 6570 144 Ferguson Road **Auburn, CA 95603** 530.823.4850

# **Partnering for** Reliability

This year's water shortage demonstrated the importance of the partnerships PCWA has built with water utilities in adjacent

Emergency water interties with neighboring water utilities became an essential part of PCWA's "patch quilt" pattern of water supplies during the PG&E Bear River Canal failure. The Nevada Irrigation District provided treated water service and augmented canal water flows in the Auburn area for PCWA. The City of Lincoln activated groundwater wells to supplement PCWA treated water flows to the city. Interties were opened with the City of Roseville and the San Juan Water District to supply treated water to additional PCWA customers.

The Midway Heights Water District operated its system so that it supplemented supplies for PCWA. The Cal-American Water Company activated groundwater wells to serve water to customers normally provided treated water by

"PCWA is grateful to our colleagues in the surrounding area for their support and rapid action during the water crisis," said PCWA General Manager David A.

# Stay in touch

PCWA Update is the bimonthly newsletter produced by the Placer County Water Agency. Stay up to speed on local water developments by watching for it in your billing statements, or online at www.pcwa.net.



**Summary of Agency Costs and Efforts** 

### **Placer County Water Agency**

#### **Capturing Agency Costs and Efforts on the Recent Water Shortage Emergency**

Upon being notified of the PG&E Bear River Ca nal collapse, the Agency established a work order to track Agency water shortage emergency efforts and costs that would be incurred as a result of the canal collapse. The Agency's efforts and costs to can be segregated into four broad categories: 1) Operations, 2) Public Outreach and Administ ration, 3) Loss of Water Sales Revenue and 4) Re-directed Personnel. PG&E has voluntarily and generously offered to lessen the financial impact to the Agency by covering some of these costs.

The **Operation** category is defined as additional operating costs associated with the water shortage emergency. These additional operating costs including non-routine pumping costs, purchased water from neighboring water districts, materials, equipment, contract construction services and overtime labor needed to secure, move and re-route water from all available source to where it was needed.

Given the water shortage was caused by an infr astructure failure and the Agency had lim ited alternative water sources, efforts and costs to re-route and "spread" the water to as many customers as possible was the objective. The most helpful and most expensive of these efforts was the non-routine pumping of water from the American River through the American River and Ophir Pump Stations. This effort proved invaluable as the pumped American River water was able to meet all of the treated water demands and most of the irrigation demands in Lower Zone 1, which otherwise would not have been met. Early on in the emergency, daily tracking of seven primary pumps for both the energy used (kW h) and costs incurred commenced, which by end of the canal outage on June 6<sup>th</sup> totaled \$720,000 for the canal outage period (see below PG&E offer to offset the pum ping costs). Additional costs to re-route water included overtime, temporary labor, equipment rentals, materials, security and guniting. Although these costs are still being accumulated and determined, the cu rrent estimate is over \$200,000. The largest components of these costs were materials and construction costs for an alternative intake at South Canal.

Coupled with the effort to re-route availabl e supplies was the cooperation and efforts of neighboring water agen cies to assist where possible. Opening interties with adjacent water agencies at key points became an essential part of the Agency's "patch quilt" pattern to supply water to as many as possible and maintain fire flow water. Most of the water supplied will be repaid through future water exchanges, thereby, reducing the financial impact to the Agency. Based on agreements, the Agency will pay one neighboring water agency an estimated \$5,000 for their supplemental water.

The **Public Outreach and Administration** category is defined as a dditional costs and efforts, including outside services not re lated to field operations incurred to notify and educate Agency customers about the water shortage e mergency. The heavy precipitation winter followed by a wet and cool spring, meant that most people in the region would have reasonably thought there

were sufficient water supplies, thus the Ag ency had to notify all custom ers about the infrastructure failure. To do so, the Agency launched a public outreach campaign to notify, educate and inform Agency customers of the water shortage emergency and asked for their help in conserving water during the e mergency. To efficiently and effectively im prove responsiveness, every aspect of this public ou treach directed people to the Agency's website where daily up-to-date inform ation was posted. Public outreach efforts inclu ded customer communications, mailings, meetings and p resentations. The primary costs for these efforts included outside services, printing, postage, legal, advertising, supplies, facilities and meeting expenses. The total public outreach cost is estimated about \$120,000 with printing and postage of two mailings to over 35,000 customers each being the largest component.

The Loss of Water Sales Revenu e category captured as a cost incurred for unavailable and undelivered irrigation canal water as a result of the can al collapse. During this emergency the Agency was able to m aintain the treated water system fully charged for customer use and fire flows needs. Unfortunately, there was insufficient water to maintain requested deliveries to irrigation canal customers as irrigation water makes up three-quarters of the total water used. The Agency is moving forward to credit the irrigation canal customer's regular bill for water that they did not receive during this crisis and PG&E has generously offered to reimburse the Agency for this loss. (see below).

The **Re-directed Personnel** category includes personnel thr oughout the Agency who put time and effort into the water shortage crisis. Many of the Agency's personnel were diverted from their regular duties to as sist in the crisis. This includes field operations staff who were moved over to help manage canal operations, office staff who were assigned to answer incoming phone calls and make calls to customers, as well as Engineering, Mapping and Information Technology efforts. These efforts totaled over \$300,000 of budge ted personnel costs. Since the regular labor is already budgeted in personnel expenses, these are <u>not</u> additional costs to the Agency, but are a measure of lost productivity on other tasks or projects.

**PG&E Lessens the Impact to the Agency** - PG&E voluntarily and generously offered to lessen the financial impact of the Bear River Canal o utage to the Agency by of fering to offset the Agency's additional non-routine pumping costs. PG&E has also of fered to reim burse the Agency for loss of water sales revenue as determined by the credits to the irrigation canal customers' regular bills for water that they did not receive during this crisis. As noted above, the additional pumping costs exceeded \$720,000 and the current estimate of the loss of water sale revenue from irrigation water customer credits is \$120,000 to \$150,000.

## THIS PAGE INTENTIONALLY LEFT BLANK

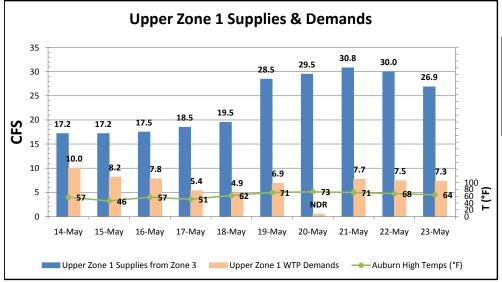
# **Daily Operations Dashboard**

#### **DAILY OPERATIONS DASHBOARD**

for TUESDAY 5/24/11



FOR INTERNAL USE	Tues 17-May	Wed 18-May	Thurs 19-May	Fri 20-May	Sat 21-May	Sun 22-May	MON 23-May
ZONE 3 Daily High Temp (°F) COLFAX	48°	60°	71°	74°	73°	70°	64°
Raw Water Supplies (CFS)							
PG&E Supply to Zone 3 (YB 96)	28.20	27.90	27.90	27.90	27.90	27.90	27.20
Treatment Plant Demands (CFS)							
Alta WTP	0.15	0.18	0.17	NDR	0.19	0.18	0.19
Monte Vista WTP	0.02	0.02	0.02	NDR	0.02	0.03	0.02
Colfax WTP	0.55	0.53	0.52	NDR	0.53	0.57	0.65
Applegate WTP	0.04	0.01	0.02	NDR	0.04	0.02	0.03
Weimar Water Company	0.27	0.76	0.62	0.66	0.72	0.64	0.66
MVCWD	1.11	1.11	1.34	1.34	1.34	1.34	1.34
UPPER ZONE 1 Daily High Temp (°F) AUBURN	51°	62°	71°	73°	71°	68°	64°
Raw Water Supplies (CFS)							
Avail. to Upper Zone 1 from Boardman Canal below Theodore	13.00	13.00	14.00	15.50	16.80	16.00	12.80
Avail. to Upper Zone 1 from Upper Bowman Canal above Halsey	5.50	6.50	5.45	5.00	5.00	5.00	5.05
Avail. to Upper Zone 1 from Bear River Canal	-	-	9.00	9.00	9.00	9.00	9.00
Avail. to Upper Zone 1 from NID via Rock Creek Reservoir	7.00	7.00	NDR	7.00	7.00	7.00	7.00
Treatment Plant Demands (CFS)							
Christian Valley Park CSD	0.31	0.29	0.38	0.50	0.50	0.47	0.56
Bowman WTP	1.00	1.15	2.09	NDR	2.19	1.99	1.78
Auburn WTP	4.04	3.50	4.42	NDR	4.99	5.00	4.97
LOWER ZONE 1 Daily High Temp (°F) ROCKLIN	58°	71°	83°	86°	84°	79°	77°
Raw Water Supplies (CFS)							
To Auburn Tunnel from American River Pump Station	92.00	92.30	91.83	99.03	103.89	110.48	114.86
To Auburn Ravine via Auburn Tunnel	29.00	29.00	29.00	29.00	29.00	29.00	28.20
To PG&E South Canal via Ophir Road Pump Station (Transfer Basin	63.00	60.30	60.25	60.25	60.27	60.25	60.21
To PG&E South Canal via Auburn Tunnel Pump Station #1	0.00	0.00	0.00	9.92	16.54	23.52	24.47
To Dutch Ravine System (YB 76) via PG&E South Canal	27.20	26.40	27.30	26.80	26.60	26.50	27.62
To Boardman Canal (YB 78) via PG&E South Canal	10.80	15.30	19.30	16.50	20.30	22.60	25.05
To Lower Greeley (YB 91) via PG&E South Canal	2.80	2.70	2.70	2.50	2.90	2.80	3.65
Treatment Plant Demands (CFS)							
Foothill WTP	25.81	21.92	19.51	NDR	28.06	33.10	32.07
Sunset WTP	0.00	0.00	0.00	NDR	0.00	0.00	0.00



NDR = No Data Reported

High Temperature Forecast (°F)							
	Tues	Wed	Thurs				
	24-May	25-May	26-May				
Colfax	67°	54°	61°				
Auburn	70°	56°	65°				
Rocklin	79°	63°	72°				

NOTE: Daily Dashboard provides a general overview of supply vs. demand. All flow data is provisional and some values are estimated.

<sup>\*</sup> Temperature forecasts and daily highs from www.wunderground.com @ stations KCASOUTH6 (Colfax), KCAROCKL9 (Rocklin), and KAUN (Auburn)

# **PCWA Western Water System Maps**



BUSINESS CENTER I 44 Ferguson Road

MAIL
P.O. Box 6570

Auburn, CA 95604

PHONE 530.823.4850 800.464.0030 WWW.PCWA.NET

### **Irrigation Canal System Information**

#### **Upper Zone 1 (See "Upper Zone 1 Irrigation Canal System Map"):**

#### Group 1 - Upper Zone 1 Canals – Shown on the Map in Blue:

- Auburn Pipe (upstream of the Auburn water treatment plant)
- Boardman (from Bowman to Lincoln Way near the Sizzler Restaurant)
- Bowman

#### Group 2 - Upper Zone 1 Canals - Shown on the Map in Brown:

- Auburn Pipe (below the Auburn WTP)
- Boardman (Lincoln Way to Auburn Ravine Road)
- Freeman
- Fiddler Green Diversion
- Shockley

### Group 3 - Upper Zone 1 Canals - Shown on the Map in Purple:

- Boardman (Auburn Ravine to Powerhouse Rd)
- Gaylord Pipe
- Jamison Pipe
- Lower Banvard
- Lower Banyard Extension
- Middle Banvard
- Maring Pipe
- Middle Banvard Pipe
- Middle Fiddler Green
- Newcastle

- Newcastle Irrigation Line
- **Rock Springs**
- Shirland
- Shirland Stub
- South Loop Pipe
- Upper Banvard
- Upper Fiddler Green
- Upper Greeley
- Wise Forebay (PG&E)

#### Lower Zone 1 (See "Lower Zone 1 Irrigation Canal System Map"):

#### These canals appear in pink on the Zone 1 map.

- Antelope
- Antelope Stub
- Barton
- Baughman
- Ben Franklin
- Boardman, below Newcastle
- Caperton
- Dutch Ravine
- East Perry
- Eastside
- Ferguson
- Laird Pump
- Lower Greeley
- Lyall
- Mammoth Pipe

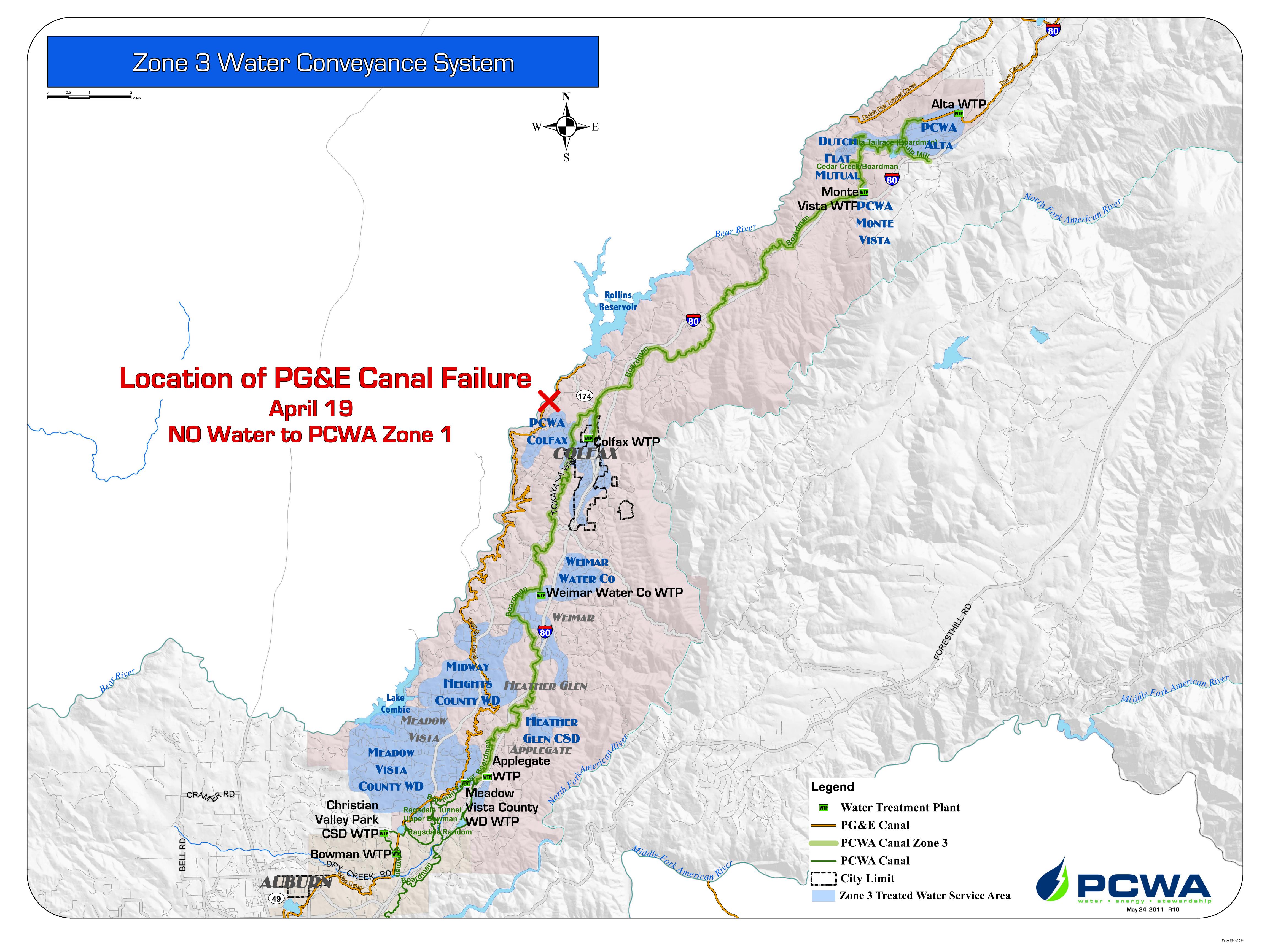
- Monte Rio Pipe
- Morgan
- Niegel
- Penryn
- Perry
- Red Ravine
- South Canal (PG&E)
- Stallman
- Sugarloaf
- Turner
- Turner Pump
- West Perry
- Westside
- Yankee Hill

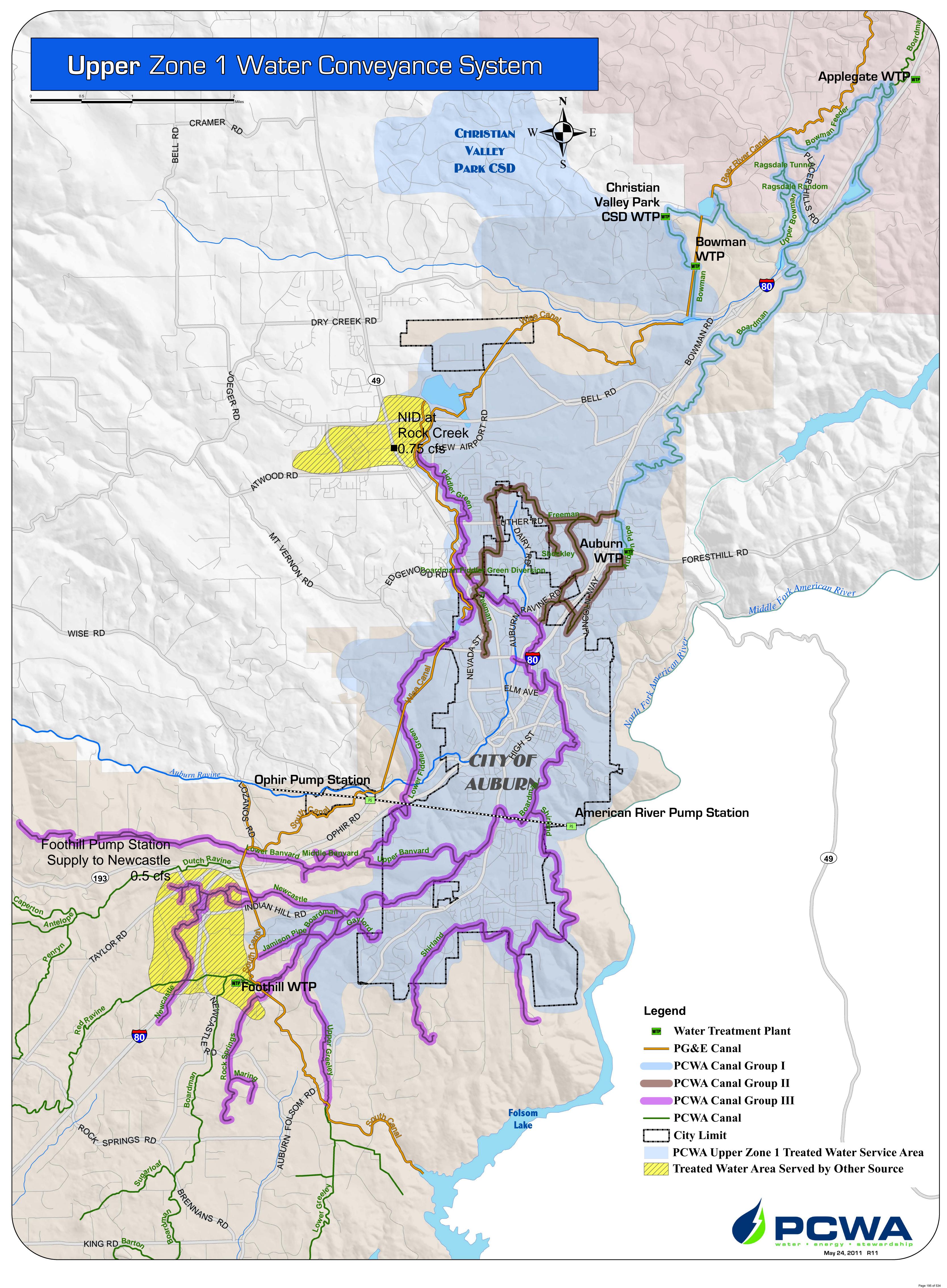
#### **Zone 3 (See "Zone 3 Irrigation Canal System Map"):**

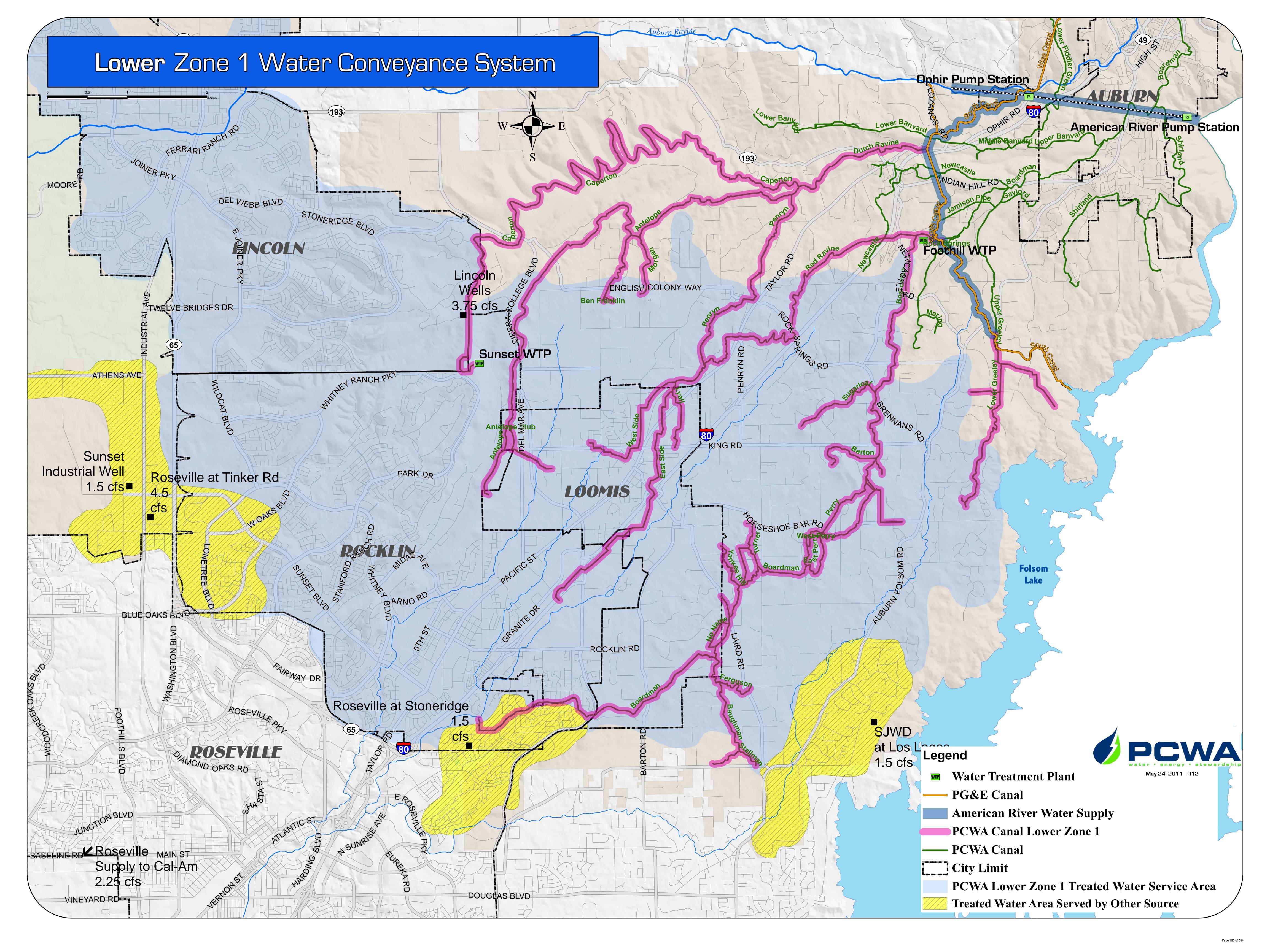
#### These canals appear in green on the Zone 3 map.

- Alta Tailrace
- Boardman / Lake Theodore
- Boardman (PG&E's) (AKA Towle)
- Boardman from Alta to Bowman
- Bowman Feeder
- Cedar Creek

- Colfax Supply Line
- Penstock (PG&E)
- Pulp Mill
- Ragsdale Random
- Ragsdale Tunnel
- Upper Bowman







**Letters of Appreciation** 



### PLACER COUNTY FARM BUREAU

Affiliated with the California Farm Bureau Federation and the American Farm Bureau Federation

June 13, 2011

David Breninger General Manager Placer County Water Agency 144 Ferguson Rd. Auburn Ca.

Dear Mr. Breninger:

On behalf of the Placer County Farm Bureau Board of Directors, and our members adversely affected by the Bear River Canal break, we would like to thank you and all the people at PCWA that worked so hard to restore normal water deliveries. We understand that developing the best strategy to fix the break required some time and ultimately a plan of action was adopted and work to make the repairs then began quickly.

We also appreciated the cooperation and support PCWA extended to the Nevada Irrigation District during this water shortage crisis. Placer County farmers and ranchers depend on a reliable water supply to produce their crops and raise their livestock. When an emergency such as the Bear River Canal break occurs, it is especially appreciated that people understand the subsequent negative impacts and work together to fix the problem as quickly as possible.

Again, thank you for all of your efforts during this water shortage emergency.

Sincerely,

Carol Scheiber, President

Placer County Farm Bureau

Paral Scheiber



### Mountain Mandarin Growers' Association

Dear PCWA employees,

Members of the Mountain Mandarin Growers' Association of Placer County would like to take this moment to thank your agency for its quick action in averting the recent canal outage. We also commend you for your ability to work effectively and seamlessly with PG&E, landowners, and other agencies in the successful outcome of this emergency.

In fact, the entire county of Placer owes you a big "Hoorah"! The mandarin Festival, agro-tourism, Farm and Barn festival, popular nurseries, restaurants, and a burgeoning farmers' market industry supported by local retailers, are just a few of the many beneficiaries of your efforts. In the mandarin business, it is a seldom spoken, but well known fact, that our water is one of the reasons the fruit tastes so good!

Keep up the good work. I look forward to thanking your field staff when I see them at the ditch.

Sincerely,

Tracy Chimenti,

Secretary, Mountain Mandarin Growers' Association

то	DATE	INFO	ACTION
Gni. Mgr.	6-8		
Directors			
Attorney			
Brd. Clerk			
Dept. Heads			
Mgt. Team			
Admin. Serv. Dir.			
Cust. Serv. Dir.			
Field Serv. Dir.			
Finance Dir.			
Pwr. Sys. Mgr.			
Stg Aff Dir.			
Tech. Serv. Dir.			
Everyone Gray	68	X	
/			

Turner / Lipp P.O. Box 640 Newcastle, CA 95658

Mr Brennger -

06-10-11 14:09 RCVD

There is just a nate to thank pur and

Jacon staff for all pace efforts, in our receive

evester shortest (pance.). We attended one of the

meetings and realized how deligious are of you

were in attempting to heep us legised. We

hope (y there were is a next time) that the

PCNA customers could find a way to hear more

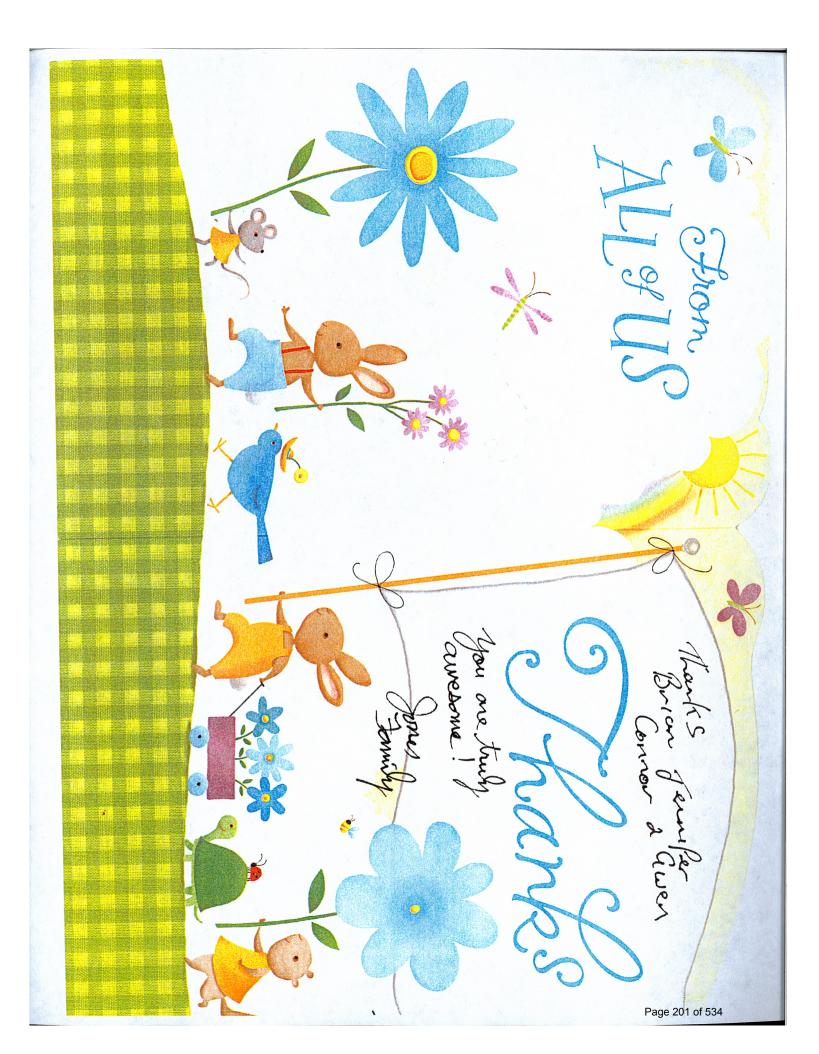
about peer have efforts

algain, our sincere thanks to pase and to

all gain, sur sincere thanks to pase and to

all gain staff. (on life

A muchelle Tuessee







## THIS PAGE INTENTIONALLY LEFT BLANK

Appendix B-5 CUWCC Report						
acer County Water Agency 10 Urban Water Management Plan						
10 Urban Water Management Plan lopted June 16, 2011						

TI	ne fields in red			Primary co	
		Agency name:	Placer County Water Agency	First name:	Harley
	. 44	Reporting unit n (District name)		Last name:	Lukenbill
		Reporting unit r	number: 271	Email: hlu	ıkenbill@PCWA.net

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

# **Base Year Data**

Comments:

Link to FAQs

Reporting Unit Base Year	What is your reporting period?
Base Year 2008	
BMP 1.3 Metering	-
Number of unmetered accounts in Base Year	0
BMP 3.1 & BMP 3.2 & BMP 3.3 Resident	
Number of Single Family Customers in Base Y	Year 29,042
Number of Multi Family Units in Base Year	3,057
<b>BMP 3.4 WaterSense Specification (WSS</b> Number of Single Family Housing Units cons	10001
Number of Multi Family Units prior to 1992	376
Average number of toilets per single family ho	pusehold 2.5
Average number of toilets per multi family ho	usehold 1.5
Five year average resale rate of single family	households 5
Five-year average resale rate of multi family h	households 4
Average number of persons per single family	household 2.945
Average number of persons per multi family h	nousehold 1.64
BMP 4.0 & BMP 5.0 CII & Landscape	
Total water use (in Acre Feet) by CII accounts	5156
Number of accounts with dedicated irrigation	meters 481
Number of CII accounts without meters or with	th Mixed Use Meters 1,838
Number of CII accounts 1,838	

The fields in red		one 1	Primary contact: First name: Harley  Last name: Lukenbill  Email: hlukenbill@PCWA.net	You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.	Link to FAQs
20	09		See the co	See the complete MOU:	View MOU
BMP 1.1 Operations	S Practices	Conservation Coordinator			
		Last Name Title Phone	Harley  Lukenbill  Deputy Director of Customer Service  5308234880  hlukenbill@pcwa,net	Note that the contact information may be the primary contact information at the to If this is your case, excuse the inconven please enter the information again.	p of the page.
		a. Enact and 6 b. Enact and development c. Support leg	ne or more of the following: enforce an ordinance or establish t enforce an ordinance or establish pislation or regulations that prohibit ordinance or establish terms of ser	terms of service that prohibit water was n terms of service for water efficient d water waste rvice to facilitate implementation of wa	esign in new
		f. Support loc  To document this BMP, p	·	nits requirements for water efficient de	əsign in new
		b. A description regulatory and conference of the conference of th	on of, or electronic link to, any ord agencies with the water agency's sion of any water agency efforts of local requirement of agency support positions with respect to the support of agency support positions with respec	linances or requirements adopted by loservice area.  to cooperate with other entities in respect to adoption of legislation or requirements.	the adoption or
		You can show your doc addresses), and/or ente talie@cuwcc.org	cumentation by providing files, lering a description.	inks (web	

Sec. 41222 WATER WASTE CHARGE. Ref: Section No. 41306 (c)
Charge Action
------ (first occurrence) written notification
----- (second occurrence) written warning

Enter a description:

Primary contact:

First name: Harley

Reporting unit name

Reporting unit number: 271

Last name: Lukenbill

Email: hlukenbill@PCWA.net

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

2009 BMP 1.2 Water Loss Control	View MOU
AWWA Water Audit  Agency to complete a Water Audit & Balance Using The AWWA Software  • Yes • No Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:	
2009 PCWA Water Audit beta	
Water Audit Validity Score from AWWA spreadsheet 55	

Agency Completed Training In The Component Analysis Process	○ Yes ⊙ No
Completed/Updated the Component Analysis (at least every 4 years)?	○ Yes
Component Analysis Completed/Updated Date	

#### **Water Loss Performance**

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective ⊙ Yes O No

Agency Completed Training In The AWWA Water Audit Method

#### **Recording Keeping Requirements:**

Date/Time Leak Reported Leak Location

Type of Leaking Pipe Segment or Fitting Leak Running Time From Report to Repair

Leak Volume Estimate Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective 

O Yes O No

Type of Program Activities Used to Detect Unreported Leaks

Leak survey with amplified ground microphone and leak corrolators

#### **Annual Summary Information**

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)
194		16		\$542,412.00	8.15

Comments:

Cost of interventions is the cost to repair all water leaks

Primary contact:

Agency name: Placer County Water Agency

First name: Harley

(District name) Zone 1 Reporting unit number: 271 Last name: Lukenbill Email: hlukenbill@PCWA.net

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

2	0	0	9	BMP 1.2 Water Loss Control

View MOLL

	40		Water	Loss Con	trol		view MOO			
A۱	WWA Wat	ter Audit								
	Agency to complete a Water Audit & Balance Using The AWWA Software O Yes O No Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:									
	2009 PCWA Water Audit beta									
		dit Validity Sco VA spreadshee								
			oleted Training In oleted Training In			Yes () No Yes () No				
		•	Component Analys		ry 4 years)? (	Yes () No				
W	ater Loss	Performan	ce							
	Agency Re	paired All Rep	orted Leaks & Brea	aks To The Ext	ent Cost Effective C	Yes O No				
R	ecordin	g Keeping	Requiremen	ts:						
	Type of L	ne Leak Report eaking Pipe Se ume Estimate	ed egment or Fitting	Leak	Location Running Time From R of Repair	Report to Repair				
	Agency	Located and R	Repaired Unreporte	d Leaks to the	Extent Cost Effective	○ Yes ○ No				
	Type of	Program Activ	ities Used to Detec	t Unreported L	eaks					
	Leak s	urvey with am	plified ground micro	ophone and lea	k corrolators					
Ar	Annual Summary Information  Complete the following table with annual summary information (required for reporting years 2-5 only)									
	Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)			
	194			16		\$542,412.00	8.15			

Comments:

Cost of interventions is the cost to repair all water leaks

The fields in red are required.	Primary contact:		You must enter the				
Agency name: Placer County Water Agency	First name: Harley		reporting unit number that we have on				
Reporting unit name (District name)	Last name: Lukenbill		record for your				
7 2010 1		C)A/A ===	agency. Click here to open a table to				
Reporting unit number: 271	Email: hlukenbill@P	CvvA.net	obtain this number.				
BMP 1.3 Metering wi	th Common	lity	Link to FAQs				
DIVIF 1.5 Wetering Wi		ee the complete	MOLI: View MOLI				
CHWCC							
COWCC	See the coverage	requirements for	this BMP:				
Implementation							
Does your agency have any unmetered service connect	tions?	○Yes					
If YES, has your agency completed a meter retrofit	plan?	OYes ONo					
Enter the number of previously unmetered accounts							
during reporting year:	⊙Yes ○No						
Are all new service connections being metered?							
Are all new service connections being billed volumetrica							
Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?							
Please Fill Out The Following Matrix							
Account Type	# Metered Accounts Bille	ed by Billing Frequer	ncy # of estimated				
Accounts Read Single-Family 27,598 17,598	Volume 17,598	Per Year Bi-monthly	bills/yr				
Multi-Family 677 677	677	Bi-monthly	6				
1,703   1,703	1,703	Bi-monthly	6				
Industrial 1	1	Monthly	12				
Institutional 153 153	153	Bi-monthly	6				
Dedicated Irrigatic         479         479           Other         1,684         1,684	1,684	Bi-monthly Other	6				
Other	1,004	Other					
Other		Other					
Other		Other					
Number of CII Accounts with Mixed-use Meters 1,857							
Number of CII Accounts with Mixed-use Meters Retrofitte	d						
with Dedicated Irrigation Meters during Reporting Period	0		3				
Feasibility Study							
Has your agency conducted a feasibility study to assess incentives to switch mixed-use accounts to dedicated la		n to provide Nes	<ul><li>No</li></ul>				
If YES, please fill in the following information:  A. When was the Feasiblity Study conducted							
B. Email or provide a link to the feasibility study (or de	escription of):						
File name(s): Email files to natalie@cuwcc.or	g Enter the file name h	ere e.g. WaterWasteF	Prevention Ordinan				
Wah address(-) UDI			Toverition ordinaries				
Web address(s) URL: comma-separated list Enter the URL to your documentation.							

General Comments about BMP 1.3:

The fields in red are r				Primary				You must enter the
Agency name:	Placer Cou	inty Water Ag	gency	First nar	ne: Harley	1		reporting unit number that we have on
Reporting unit				Last nar	ne:	h:II		record for your
(District name)				J .	Luken			agency. Click here to open a table to
Reporting unit	number: 2	71		Email:	hlukenbill	@PCWA.n	et	obtain this number.
. 6.6								
								Link to FAQs
CLIMICC			I Conso				<b>g</b> a spreadsheet ar	View MOU
2009 the fil	le to natalie@d	cuwcc.org.						
Implementation	-		-					
Enter the Water	Rate Struc	tures that	are assigned	to the m	ajority o	f your cu	stomers, by	customer class
Rate Structure	Custome	Class	Total Reve	nue Com	modity (	Charges		nue Customer ice (Fixed Charges
Increasing Block	Single-Fan	nily	8,859,986.0	0			8,773,397.0	
Increasing Block	Multi-Fami	ly	65,499.00				87,035.00	
Increasing Block	Commercia	al	206,381.00				268,294.00	
Increasing Block	Industrial		185,199.00				11,750.00	
Increasing Block	Institutiona		65,499.00				87,035.00	
ncreasing Block Dedicated Irrigation 277,265.00					107,857.00			
Increasing Block Other 59,117.00 116,837.00								
Implementation (	Option (Co	⊙Use A	nnual Revenue anadian Water	e As Repoi		ociation Ra	te	
		A is select,	enter the fil			canadiar	ı model	
Retail Waste Wa Customer Class	ter (Sewer	) Rate Str	ucture by					
Agency Provide Se Select the Retail specific custome	l Waste Wa	ter(Sewer)	Rate Structi	•	⊙No ned to th	ie majorii	ty of your cu	stomers within a
Rate Structure C	Customer C	lass	Total Rever	ue Com	modity C	harges		nue Customer ice (Fixed Charges
Select a Rate Struc	Other							
Select a Rate Struc	Other							
Select a Rate Struc	Other							
Select a Rate Struc								
Select a Rate Struc								
Select a Rate Struc								
Select a Rate Struc								
		Comments:						
		Johnnettia.						

Reporting uni		Last name	e: Harley	Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.	Light to FACO
2009	BMP 2.1 Pul Reporting	olic Outreach - I	Retail		Link to FAQs View MOU
	Are there one or r which can be cour	nted to help your agency ne(s) of the wholesale	performing public outreach		● Yes ○ No
	Report a minimum	performing public out n of 4 water conservation tion Programs List	related contacts your ager	ncy had with the public during the year ntact take place during reporting year?	
	which can be cour	Newsletter articles on of Select a public contact Select a public contact he Media more wholesale agencies puted to help your agency	conservation  performing media outreach comply with the BMP?	Public Information Programs  messages printed on bill, information p  OYes ONo	ackets
	or Retail Ager	ncy (Contacts with th	dui	I at least one contact take place ring each quarter of the reporting	
	Number of Media Contacts  12	Did at least one contaeach quarter of the re  Articles or stories resulti Select a type of media of Select a type of Media	porting year? ing from outreach contact	Media Contact Types	

Select a type of media contact
Select a type of media contact

Is a Wholesale Agency Performing Website Updates?  Did one or more CUWCC wholesale agencies agree to assume your agency's  responsibility for meeting the requirements of and for CUWCC reporting of this BMP?  Oyes ONo	KWA		pcwa.net	tion het, hew, lawn removal, water efficiency tips	during ©Yes ONo	<b>Public Outreach Annual Budget</b> Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.	Personnel Costs Included? If yes, check the box.	30 % of dues	actual labor	2% of wages		
Is a Wholesale Agency Performing Website Updates?  Did one or more CUWCC wholesale agencies agree to assume yo responsibility for meeting the requirements of and for CUWCC represents.	Enter the name(s) of the wholesale agency (comma delimited)	Is Your Agency Performing Website Updates?	Enter your agency's URL (website address):	Describe a minimum of four water conservation related updates to your agency's website that took place during the year:	Did at least one Website Update take place during each quarter of the reporting year?	<b>Annual Budget</b> blic outreach programs. ng many rows. Please in	Amount	\$10,000	\$2,652	\$2,000		
Is a Wholesale A Did one or more CUV responsibility for mee	Enter the name(s) of the w agency (comma delimited)	Is Your Agency P Updates?	Enter your agency's	Describe a minimum of four related updates to your age took place during the year:	Did at least one Wet each quarter of the 1	<b>Public Outreach Annual Budget</b> Enter budget for public outreach progreategories by entering many rows. Ple	Category	RWA	crew	lukenbill		

The fields in red		Placer County Water Agency  First na  ame  Zone 1  Last na	contact: me: Harley me: Lukenbill hlukenbill@PCWA.net	Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.
CUWCC				Link to FAQ
20	09	BMP 2.2 School Education Pro School Programs	ograms, Retail Agencies	S View MOU
		Is a wholesale agency implementing school counted to help your agency comply with th		⊙Yes ○No
		Enter Wholesaler Names, separated by com	mas: Roseville, Cal Americ	can
		☑ Materials meet state education framewor	k requirements?	
		Description of Materials	supplements, teach	er materials, water maps,contests
		☑ Materials distributed to K-6 Students?		
		Description of materials distributed to K-6 Students		
		Number of students reached		
		✓ Materials distributed to 7-12 Students?		
		Description of materials distributed to 7-12 Students	none	
		Number of Distribution		
		Annual budget for school education program	\$20,000.00	
		Description of all other water supplier educa programs	RWA, American Riv	ver education, Placer Nature Center
		School Program Activities		
		Classroom presentations:		
		Number of presentations 50	Number of attendees 30	
		Large group assemblies:		
		Number of presentations 1	Number o	of attendees 600
		Children's water festivals or other ever	nts:	
		Number of presentations 1	Number o	of attendees 500
		Cooperative efforts with existing scien or judging) and follow-up:	ce/water education programs	(various workshops, science fair awards

Number of presentations

10

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

317

Number of attendees

Description		Placer	Placer Nature Center	Senter						
Number distributed Staffing children's	istributed children's	317 s booths	Number distributed 317  Staffing children's booths at events & festivals:	& festiva	ls:			1		
Number of Water cor	f booths Inservatio	on conte	2 sts such as	s poster a	Number of booths 2 8 Water conservation contests such as poster and photo:	Numb	Number of attendees	160		
Description		Califor	California Sate fair	fair						
Number distributed	istributed	160		:   		•				
Otter mon Number Of	i <b>netary av</b> )ffered	vards/tu	inding or s	scholarshi	Offer monetary awards/funding or scholarships to students:  Number Offered  0	ents:	Total Funding	0		
Teacher t	Teacher training workshops:	vorksho	bs:							
Number of	f presentations	tions	0			Numb	Number of attendees	0		
Fund and/ etc.:	I/or staff	student	: field trips	s to treatr	ment facili	ies, recycli	or staff student field trips to treatment facilities, recycling facilities, water conservation gardens,	vater con	servation gard	lens,
Number of trips	f tours or field	field	0			Number	Number of participants	0		
College i	College internships Number of internships	<b>os in wat</b> ps	College internships in water conservation offered:  Number of internships  0	vation off	ered:		Total funding	0		
Career fa		shops:			ſ					Г
Number of		tions	0		٦	Nump	Number of attendees	0		$\neg$
Additional	al prograi _	m(s) sup	ported by	r agency b	out not me	program(s) supported by agency but not mentioned above:	oove:	Г		
Description		Be wat	Be water Smat Challenge	Challenę	ge					
Number of (applicable)	f events (if )	<u>,</u>	~			Number	Number of participants	4247		
Total rep (include a	orting pe	eriod buc y costs):	lget exper	nditures f	or school (	Total reporting period budget expenditures for school education programs (include all agency costs):	programs	23000		

The fields in red a	are required.		Primary contact:
	Agency name:	Placer County Water Agency	First name: Harley
Add	Division name (Reporting unit)	Zone 1	Last name: Lukenbill
יון ייווי	Reporting unit nu	mber: 271	Email: hlukenbill@PCWA.net

### WATER SOURCES

2009

Service Area Population: 83269	)		
<b>Potable Water</b>			
Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Rivers and Lakes (PG&E)	38,455.00	Surface	treated water into Zone 1
		Other	
Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Other	
Exported Water Name	AF/YEAR	Where Exported?	
interties to others	10,568.00	Lincoln, cal am, other small p	ourveyors

The fields in red a	re required.		Primary contact:
	Agency name:	Placer County Water Agency	First name: Harley
Ad	Division name (Reporting unit)	Zone 1	Last name: Lukenbill
THE PERSON	Penarting unit nu	mber: 271	Email: hlukenhill@PCWA net

### **Water Uses**

CUWCC

2009

### **Potable Water Billed**

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
	27,598.00	15,556.00			
	677.00	1,959.00			
Commercial	1,703.00	3,044.00			
Industrial	1.00	414.00			
Institutional	153.00	1,178.00			
Dedicated Irrigation	479.00	1,910.00			
Other	1,684.00	420.00			ciduws,const hyd,fire prot,no demand
Other					

# Potable Water Un-Billed

Customer Type	Meter Accounts	Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					

The fields in red			Primary co	
	Agency name:	Placer County Water Agency	First name	Harley
	Reporting unit n	ame		
Ad	(District name)	Zone 1	Last name:	Lukenbill
11 T	Reporting unit r	number: 271	Email: hlu	ıkenbill@PCWA.net

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

## **CUWCC** Base Year Data

Comments:

Link to FAQs

Reporting Unit Base Year	What is your reporting period?
Base Year 2008 BMP 1.3 Metering	
Number of unmetered accounts in Base Year	0
BMP 3.1 & BMP 3.2 & BMP 3.3 Resident	
Number of Single Family Customers in Base	
	8,057
BMP 3.4 WaterSense Specification (WSS Number of Single Family Housing Units con	
Number of Multi Family Units prior to 1992	376
Average number of toilets per single family h	ousehold 2.5
Average number of toilets per multi family ho	ousehold 1.5
Five year average resale rate of single family	households 5
Five-year average resale rate of multi family	households 4
Average number of persons per single family	household 2.945
Average number of persons per multi family	household 1.64
BMP 4.0 & BMP 5.0 CII & Landscape	
Total water use (in Acre Feet) by CII accoun	ts 5156
Number of accounts with dedicated irrigation	meters 481
Number of CII accounts without meters or w	ith Mixed Use Meters 1,838
Number of CII accounts 1,838	

The fields in red are required.  Agency name:  Reporting unit name (District name)  Reporting unit number:  271	r Agency	Primary contact: First name: harley  Last name: lukenbill  Email: hlukenbill@pcwa.r	You must ent have on reco process a cor Click here to to that in this	
	oeration Pra		/holesalers	View MOU
a. Financial Investments and Buil  List the total monetary amount of financial in or to otherwise support, implementation of B and maximize economies of scale benefits.  BMP Section and/or Sub-section Name	ncentives and equivalent resou BMPs, subtotaled by BMP. List Monetary	regional partnerships dev	eloped to encourage resource netary Amount for	conservation
no support requested  all support by Regional Water A	\$0.00		.00	
b. Technical Support  Supply a summary of types of technical support provided to retail agencies	Provided by Regional Water Au			
c. Program Management  If your wholesale agency has assumed reporting responsibility,  list the programs managed on behalf	Retail Agency Name  Lincoln  Cal American	Program Name  water efficiency  water efficiency		

1 of 2

Questions? office@cuwcc.org

#### d. Water Shortage Allocation

If a water shortage allocation plan or policy has been developed, provide the date of adoption and electronic link to the document or hardcopy.

12/01/2005

Date Format: 05/15/2010

Enter the file name of the document.
Send it to natalie@cuwcc.org

### e. Non-signatory Reporting

Receipt of reports

none

Enter the file name of the document. Send it to natalie@cuwcc.org

### f. Encourage CUWCC Membership

List of efforts to recruit retailers and amount of dues paid on behalf of retail agencies.

#### all members

Enter the file name of the document. Send it to natalie@cuwcc.org

The fields in red	d are required.	Primary contact:	
	Agency name: Placer County Water Agency	First name: Harley	You must enter the reporting unit number that
AL	Reporting unit name		we have on record for your
יםי יחי	(District name) Zone 1	Lukenbill Lukenbill	agency. Click here to open a table to obtain this
	Reporting unit number: 271	Email: hlukenbill@PCWA.net	number.
CUWCC			
			Link to EAO
			Link to FAQs
20	BMP 1.2 Water Loss	Control	View MOU
	Did your agency complete a pre-screening	system audit in 2009? Yes	No O
	If yes, answer the following:		
	Determine metered	d sales in AF: 10,568.00	
	Definition: other accountable Determine system	verifiable uses AF: 0.00	
	uses not included in metered sales, such as unbilled water	vermable uses At .	
	use, fire suppression, etc. Determine total su	pply into the system in AF: 10,568.00	
	Does your agency keep necessary data on	file to verify the answers above? Yes	No No
	Did your agency complete a full-scale syste	em water audit during 2009? Yes	No •
	Does your agency maintain in-house recor worksheet for the completed audit which		WA No
	Did your agency operate a system leak det	tection program? Yes   No	
	Comments:		

The fields in red are required.	Primary contact:		You must enter the
Agency name: Placer County Water Agency	First name: Harley		reporting unit number that we have on
Reporting unit name (District name) Zone 1	Last name: Lukenbill		record for your agency. Click here to
Parastic a veit a veit a	Email: hlukenbill@P0	CWA net	open a table to
Reporting unit number: 271	Linaii. Illiukeribiii@PC	ZVVA.Het	obtain this number.
BMP 1.3 Metering with	h Commod	ity	Link to FAQs
Divir 1.5 Metering with		ee the complete	MOLL: View MOLL
CIWCC		•	
COWCC	ee the coverage re	equirements for	this BMP:
Implementation			
Does your agency have any unmetered service connection	ns?	○Yes ○No	
If YES, has your agency completed a meter retrofit pla	an?	OYes ONo	
Enter the number of previously unmetered accounts fit			
during reporting year:		OYes ONo	
Are all new service connections being metered?			
Are all new service connections being billed volumetrically	,	○Yes ○No	
Has your agency completed and submitted electronically written plan, policy or program to test, repair and replace			
Please Fill Out The Following Matrix			
Account Type	Metered Accounts Billed Volume	, pilling rrequen	
Accounts Read Single-Family 27,598 17,598	17,598	Per Year Bi-monthly	bills/yr
Multi-Family 677 677	677	Bi-monthly	6
Commericial 1,703 1,703	1,703	Bi-monthly	6
Industrial 1	1	Monthly	12
Instiitional 153 153  Dedicated Irrigatic 479 479	153	Bi-monthly  Bi-monthly	6
Dedicated Irrigatic         479         479           Other         1,684         1,684	1,684	Other	6
Other	1,001	Other	
Other		Other	
Other		Other	
Number of CII Accounts with Mixed-use Meters 1,857			
Number of CII Accounts with Mixed-use Meters Retrofitted			
with Dedicated Irrigation Meters during Reporting Period	0		)
Feasibility Study			
Has your agency conducted a feasibility study to assess the incentives to switch mixed-use accounts to dedicated land		to provide Nes	O No
If YES, please fill in the following information:  A. When was the Feasiblity Study conducted			
B. Email or provide a link to the feasibility study (or desc	cription of):		
File name(s): Email files to natalie@cuwcc.org	Enter the file name he	ere e.g. WaterWasteP	reventionOrdinan <b>e</b>
Web address(s) URL: comma-separated list	nter the URL to your doc	cumentation.	

General Comments about BMP 1.3:

ne fields in red	are required.  Agency name: Placer	County Water Ag	Primary conta		Click here to open a table that	
.44.	Reporting unit name (District name) Zone		Loot nome.	ukenbill	displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the	
7,70	Reporting unit number	271	Email: hluke	nbill@PCWA.net	correct information.	
CLUMCC						
CUWCC						Link to FAQs
	В	MP 2.1 Pub	olic Outreach			View MOU
20	09					VIGW 1.100
		are there one or m		_	help them comply with this BMP?	○Yes○No
		Enter the name (comma delim	e(s) of the retail agency ited)			
	R	Report a minimum	performing public outreat of 4 water conservation relation Programs List	ated contacts your ag Did at least one o	gency had with the public during the year contact take place during the reporting year?	r.
		Number of Public Contacts			Public Information Programs	
		4	General water conservation	n information		
		10	Newsletter articles on cons	ervation		
		6	Newsletter articles on cons	ervation		
			Select a public contact			
	1		Select a public contact			
		Contact with th	Are there one of BMP?	or more retail agenci	es that count on your agency to help then  Yes  No	n comply with this
		Enter the name (comma delimi	e(s) of the retail agency ited)	RWA		
		OR Wholesale A	Agency (Contacts with t	_	Did at least one contact take place during each quarter of the reporting year?	
		Number of Media Contacts	Did at least one contact to each quarter of the report		Media Contact Types	

Articles or stories resulting from outreach

Select a type of media contact

12

	d are required.  Agency name:  Reporting unit na (District name)  Reporting unit n	Zone 1	Harley	Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.
CUWCC				Link to FAC
20	09	BMP 2.2 School Education Progr School Programs	ams, Retail Agencies	View MOU
		Is a wholesale agency implementing school prog counted to help your agency comply with this BI		OYes ONo
		Enter retailer names, separated by commas:	Roseville, Cal Americ	an
		☑ Materials meet state education framework red	quirements?	
		Description of Materials	supplements, teache	er materials, water maps,contests
		☑ Materials distributed to K-6 Students?		
		Description of materials distributed to K-6 Students		
		Number of students reached		
		✓ Materials distributed to 7-12 Students?		
		Description of materials distributed to 7-12 Students	none	
		Number of Distribution		
		Annual budget for school education program	\$20,000.00	
		Description of all other water supplier education programs	RWA, American Riv	er education, Placer Nature Center
		School Program Activities		
		Classroom presentations:  Number of presentations  50	Number of 30 attendees	
		Large group assemblies:		
		Number of presentations 1	Number o	f attendees 600
		Children's water festivals or other events:		
		Number of presentations 1	Number o	f attendees 500
		Cooperative efforts with existing science/v or judging) and follow-up:	water education programs (	(various workshops, science fair awards

10

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Number of presentations

317

Number of attendees

	Description	Placer Nature Center		
	Number distributed 317  Staffing children's bo	Number distributed 317  Staffing children's booths at events & festivals:		1
	Number of booths	2	Number of attendees	160
	Water conservation	Water conservation contests such as poster and photo:	oto:	Г
	Description	California Sate fair		
	Number distributed 160	160		ľ
	Offer monetary av	Offer monetary awards/funding or scholarships to students:	students:	
	Number Offered	0	Total Funding	0
	Teacher training workshops:	workshops:		
	Number of presentations	ations 0	Number of attendees	0
	Fund and/or staff	Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens,	acilities, recycling facilities, w	rater conservation gardens,
	Number of tours or field trins	· field 0	Number of participants	0
	College internship	College internships in water conservation offered:		
	Number of internships	0 sqir	Total funding	0
	Career fairs/workshons:	suppos:		
	Number of presentations	ations 0	Number of attendees	0
	Additional progra	Additional program(s) supported by agency but not mentioned above:	t mentioned above:	
	Description	Be water Smat Challenge		
	_			1
	Number of events (if applicable)	(if	Number of participants	4247
Comments		Total reporting period budget expenditures for school education programs (include all agency costs):	ool education programs	23000

The fields in red	Agency name: P Reporting unit nar (District name)	Zone 1	Primary contact: First name: Harley  Last name: Lukenbill	You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this	
<b>*</b>	Reporting unit nu	mber: 271	Email hlukenbill@PCWA.net	number.	
CUWCC					Link to FAQs
20	10		See the co	See the complete MOU: overage requirements for this BM	View MOU IP:
BMP 1.1		Conservation Coor	dinator		
Operations	s Practices	Conservation Coordinator	Yes No		
Comments:		<b>Contact Informat</b>	ion		
		First Name	Harley	Note that the contact information may be	
		Last Name	Lukenbill	the primary contact information at the top If this is your case, excuse the inconvenion	
		Title	Deputy Director of Customer Service	please enter the information again.	
		Phone	5308234880		
		Email	hlukenbill@pcwa,net		
		Water Waste Pro	evention		
		a. Enact and b. Enact and development c. Support le d. Enact an response me e. Support lo	I enforce an ordinance or establish gislation or regulations that prohibit ordinance or establish terms of ser easures cal ordinances that prohibit water w	rvice to facilitate implementation of war	esign in new ter shortage
		To document this BMP,	provide the following:		
		b. A descript or regulatory c. A descrip enforcement	agencies with the water agency's solution of any water agency efforts of local requirement	inances or requirements adopted by lo	he adoption or
		You can show your do addresses), and/or ent	cumentation by providing files, litering a description.	inks (web	
File name(s):	Email files to na	talie@cuwcc.org	<u> </u>		
Web addres	ss(s) URL: comn	na-separated list			

Sec. 41222 WATER WASTE CHARGE. Ref: Section No. 41306 (c)
Charge Action
------ (first occurrence) written notification
----- (second occurrence) written warning

Enter a description:

Primary contact:

First name: Harley

Reporting unit name

Reporting unit number: 271

Last name: Lukenbill

Email: hlukenbill@PCWA.net

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

	1		BMP 1.2
U		.U	Water Loss Control

BMP 1.2 Vie	ew MOU
Water Loss Control	
AWWA Water Audit	
Agency to complete a Water Audit & Balance Using The AWWA Software O Yes O No Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:	
2009 PCWA Water Audit beta	,
Water Audit Validity Score from AWWA spreadsheet 55	
Agency Completed Training In The AWWA Water Audit Method  Agency Completed Training In The Component Analysis Process  Yes  No	
Completed/Updated the Component Analysis (at least every 4 years)?  O Yes O No Component Analysis Completed/Updated Date	
Water Loss Performance	
Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective O Yes O No	
Recording Keeping Requirements:	
Date/Time Leak Reported Leak Location	
Type of Leaking Pipe Segment or Fitting Leak Running Time From Report to Repair  Leak Volume Estimate Cost of Repair	
Agency Located and Repaired Unreported Leaks to the Extent Cost Effective O Yes O No	
Type of Program Activities Used to Detect Unreported Leaks	
Leak survey with amplified ground microphone and leak corrolators	
Annual Summary Information  Complete the following table with annual summary information (required for reporting years 2-5	only)
Leaks Value Of Value Of Surveyed For Undertaken for loss Cost Of Interventions Same	ater aved F/Year)
194 \$542,412.00 8.15	

Comments:

Cost of interventions is the cost to repair all water leaks

		<b>.</b>		
The fields in red are re	<u>'                                      </u>	Primary contact:		You must enter the reporting unit number
Agency name: Reporting unit n	Placer County Water Agency	First name: Harley		that we have on
	Zone 1	Last name: Lukenbill		record for your agency. Click here to
Reporting unit r	number: 271	Email: hlukenbill@P	CWA.net	open a table to obtain this number.
.44.	ID 4 0 14 1 14		14	Link to EAO
	IP 1.3 Metering wit			Link to FAQs
<b>20</b>	10	S	ee the complete	MOU: View MOU
CUWCC	See	the coverage req	uirements for this	s BMP:
Implementation				
Does your agency	have any unmetered service connection	ons?	○Yes ○No	
If YES, has you	ır agency completed a meter retrofit pl	an?	○Yes ○No	
Enter the numb	er of previously unmetered accounts fig year:	tted with meters		
Are all new service	e connections being metered?		○ Yes ○ No	
Are all new service	e connections being billed volumetricall	y?	○Yes ○No	
Has your agency o	completed and submitted electronically y or program to test, repair and replac	to the Council a	○Yes ○No	
Please Fill Out T	he Following Matrix			
Account Type	" Tretered " Tretered Tretered	Metered Accounts Bille	d by Billing Frequen	cy # of estimated
Single-Family	Accounts Read 17,598	Volume 17,598	Per Year Bi-monthly	bills/yr
Multi-Family	677	677	Bi-monthly	6
Commericial	1,703	1,703	Bi-monthly	6
Industrial	1	1	Monthly	12
Instiitional	153	153	Bi-monthly	6
Dedicated Irrigation	479 479	479	Bi-monthly Other	6
Other	1,684	1,684	Other	6
Other			Other	
Other			Other	
Number of CII Acco	unts with Mixed-use Meters			
	ounts with Mixed-use Meters Retrofitted ation Meters during Reporting Period	0		
Feasibility Study				
Has your agency c	, onducted a feasibility study to assess t h mixed-use accounts to dedicated lan		n to provide O Yes	O No
	fill in the following information:			
	e Feasiblity Study conducted			
B. Describe, uplo	oad or provide an electronic link to the	Feasibility Study Uploa	nd File	
File name(s):	Email files to natalie@cuwcc.org	Enter the file name h	ere e.g. WaterWasteP	reventionOrdinan <b>ca</b>
Web address	(s) URL: comma-separated list			
1460 addie55	Comments:	. , ,		
	Comments.			

The fields in red are	required.		Primary contact:		You must enter the reporting unit number that we have or
Agency name	Placer County V	/ater Agency	First name: Harley		record for your agency. Clic
Reporting unit			Last name		here to open a table to obta this number.
(District name)	Zone 1		Last name: Lukenbill		
Reporting uni	t number: 271		Email: hlukenbill@PCWA.r	net	
4.4					
TI V TE					Link to FAQs
BI	MP 1.4 R	etail Cons	ervation Pricin	g	View MOU
			form allows, add the structures to	a spreadsheet	and send
2010 the f	le to natalie@cuwcc	.org.			
2010					
Implementation	(Water Rate S	tructure)			
Enter the Water	· Rate Structure	s that are assigned	to the majority of your cu	istomers, by	customer class
Enter the Water	rate beractare	o that are assigned	to the majority of your ca	iscomers, by	, customer class
				Tetal Day	
Rate Structure	Customer Cla	ss Total Reve	nue Commodity Charges		enue Customer vice (Fixed Charges)
Increasing Block	Single-Family	8,859,986.0	0	8,773,397.	
Increasing Block	Multi-Family	65,499.00		87.035.00	
Increasing Block	Commercial	206,381.00		268,294.00	
Increasing Block	Industrial	185,199.00		11,750.00	
Increasing Block	Institutional	65,499.00		87.035.00	
Increasing Block	Dedicated Irriga			107,857.00	
Increasing Block	Other	59,117.00		116,837.00	
	If CWWA is	OUse Annual Revenue OUse Canadian Water Design Model select, enter the fil readsheet to natal	r & Wastewater Association Ra e name and		
Retail Waste Wa Customer Class Agency Provide Se Select the Retai specific custome	ewer Service  I Waste Water(	-	○ Yes ○ No ure assigned to the majori	ty of your c	ustomers within a
Rate Structure (	Customer Class	Total Rever	nue Commodity Charges		enue Customer vice (Fixed Charges)
Select a Rate Struc	Other				
Select a Rate Struc					
Select a Rate Struc					
Select a Rate Struc					
Select a Rate Struc					
Select a Rate Struc					
Select a Rate Struc	Other				
		Comments:			

Report (Distric Repor	cy name: Placer County Water Agence ting unit name ct name) Zone 1 rting unit number: 271	Primary contact:  First name: Harley  Last name: Lukenbill  Email: hlukenbill@PCWA	A.net	Click here to open a tab displays your agency na reporting unit name and reporting unit number. Pensure that you enter th correct information.	me 'lease
cc					Link to
)1(	BMP 2.1 Public O	utreach Cont'd			View MOU
		nses outreach programs. Please include the 1.7, above). For example, if you includ			
	Expense Category	Expense Amount	Pers	onnel Costs Included?	
	RWA	\$10,000		If yes, check the check box.	
	RWA	\$10,000 \$1,000		If yes, check the check box.	
				If yes, check the check box.	
	crew	\$1,000		If yes, check the check box.	
	crew   lukenbill     Customer Service     Additional Public Information   Please report additional puyour agency views their improvements	\$1,000 \$2,000 \$1,500  rmation Program ublic information contacts. List these acuportance / effectiveness with respect the first (where 1 = most important).  ic Outreach efforts?	dditional conta	acts in order of how	⊙Yes ONc
	crew    Lukenbill   Customer Service    Additional Public Information   Please report additional pure your agency views their important/ effective listed for the public Outreach Additional Public Outreach Addit	\$1,000 \$2,000 \$1,500  rmation Program ublic information contacts. List these acceptorance / effectiveness with respect triest (where 1 = most important).  ic Outreach efforts?  conal Information	dditional conta	icts in order of how water, with the most	
	crew   lukenbill     Customer Service     Additional Public Information     Please report additional purport     your agency views their im     important/ effective listed for the service     Were there additional Public Information     Were there additional Public Information     Customer Service     Additional Public Information     Public	\$1,000 \$2,000 \$1,500  rmation Program ublic information contacts. List these acceptorance / effectiveness with respect triest (where 1 = most important).  ic Outreach efforts?  conal Information	dditional conta	acts in order of how	
	crew    Lukenbill   Customer Service    Additional Public Information   Please report additional pure your agency views their important/ effective listed for the public Outreach Additional Public Outreach Addit	\$1,000 \$2,000 \$1,500  rmation Program ublic information contacts. List these acceptorance / effectiveness with respect triest (where 1 = most important).  ic Outreach efforts?  conal Information	dditional conta	icts in order of how water, with the most	
	crew    Lukenbill   Customer Service    Additional Public Information   Please report additional pure your agency views their important/ effective listed for the public Outreach Additional Public Outreach Addit	\$1,000 \$2,000 \$1,500  rmation Program ublic information contacts. List these acceptorance / effectiveness with respect triest (where 1 = most important).  ic Outreach efforts?  conal Information	dditional conta	icts in order of how water, with the most	

Does your agency have a water conservation o Yes O No "brand," "theme" or mascot?

mascot

⊙ Yes ○ No

Describe the brand, theme or mascot.

Have you sponsored or participated in market research to refine your message?

**Market Research** 

Water conservation corner in the newsletter & rwa

		we knowled	ge telephone survey	
Brand Message		be Water Sr	nart	
Brand Mission Statemer	nt	Be water sm	art and blue thumb	
Community Commit Do you have a commun committee?  Enter the name committees:		⊙ Yes ○ No RWA PO su	b committee	
Training				
Training Type	# of Trainings	# of Attendees	Description of Other	
2	\$2		Green Gardener	
1	\$1	j	Turf team Raley field	
Public Outreach Social Expense Category	Expense Amount			
DIAMA				
RWA	19920	CBSM pilo	ot program	
RWA	19920	CBSM pilo	ot program	
RWA	19920	CBSM pilo	ot program	
Partnering Programs		CBSM pile		
Partnering Programs	s - Partners		rogram	
Partnering Programs Na	s - Partners	Type of Pi	rogram	
Partnering Programs Na	s - Partners me	Type of ProcLCA? with RWA	rogram	
Partnering Programs Na	s - Partners me  Green Building Prog	Type of ProcLCA? with RWA	rogram	
Partnering Programs Na	s - Partners me  Green Building Prog	Type of Proceed of Processing Type of Type of Processing Type of Type o	rogram	
Partnering Programs Na	Green Building Prog  Master Gard  Cooperative Exte	Type of Proceed of Processing Type of Type of Processing Type of Type o	rogram	
Partnering Programs Na	Green Building Prog  Master Gard  Cooperative Exte	Type of Proceed with RWA with RWA eners? Insion? Ideges?	rogram	
Partnering Programs Na	Green Building Prog  Master Gard  Cooperative Exte	Type of Pr CLCA? with RWA grams? with RWA eners? nsion? leges?	rogram	
Partnering Programs Na	Green Building Prog  Master Gard  Cooperative Exte  Local Col	Type of Pr CLCA? with RWA grams? with RWA eners? nsion? leges?	rogram	

180000	ties 13 Home Depots, SMUD, Radio Disney			
Number of customers per year	Partnering with Other Utilities  Describe other utilities your agency partners with, including electrical utilities	Conservation Gardens Describe water conservation gardens at your agency or other high traffic areas or new	Landscape contests or awards  Describe water wise landscape contest or awards program conducted by your agency  Comments:	

e fields in red	Agency name: Placer County Water Agency name (District name) Zone 1  Reporting unit number: 271	Last name:	Harley	Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.	Link to FAQs
20	BMP 2.1 Pul Reporting	blic Outreach - Re	etail		View MOU
	Are there one or which can be cou	Agency Performing Pulmore wholesale agencies per nted to help your agency corne(s) of the wholesale na delimited)	forming public outreach		○ Yes ○ No
	Report a minimur	performing public outrean of 4 water conservation rel tion Programs List	ated contacts your ager	ncy had with the public during the year ntact take place during reporting year?	·.
	Number of Public Contacts 4 10 6	General water conservation  Newsletter articles on con  Newsletter articles on con  Select a public contact  Select a public contact	servation	Public Information Programs	
	which can be cou	he Media more wholesale agencies perinted to help your agency cor e(s) of the wholesale		Yes O No	
	OR Retail Age	ncy (Contacts with the l	=	d at least one contact take place ring each quarter of the reporting ar?	
	Number of Media Contacts	Articles or stories resulting Select a type of media conf	rting year? from outreach	Media Contact Types	
		Select a type of media cont			

Select a type of media contact
Select a type of media contact

ssume your agency's suwcC reporting of this BMP?  WA  The single lin reporting lines and lines and lines and lines and lines of the lines and line	Every Performing Website Updates?  Complexed agencies agree to assume your agency's grown the trequirements of and for CUWCC reporting of this BMP?  Forming Website  RWA  Imited)  RWA  Imited)  RWA  Imited)  RWA  Inch wholesale  Inch hew, lawn removal, water efficiency tips  rear:  Secondary's website that  The wholesale  Inch hew, lawn removal, water efficiency tips  rear:  Oves ONo  oorting year?  Inch Hew, lawn removal, water efficiency tips  rear:  Oves Ono  oorting year?  Inch Hew, lawn removal, water efficiency tips  rear:  Secondary Secondary  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  Secondary Secondary  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  Inch Hew, lawn removal, water efficiency tips  rear:  Secondary Secondary  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  Inch Hew, lawn removal, water efficiency tips  rear:  RWA  RWA  Inch Hew, lawn removal, water efficiency tips  RWA  Inch Hew, lawn removal, water efficiency tips  RWA  RWA  Inch Hew, lawn removal, water efficiency tips  RWA  RWA  Inch Hew, lawn removal, water efficiency tips  RWA  RWA  RWA  RWA  RWA  RWA  RWA  RW	15 a Wholesale Agency Performing Website Updates?  Did one or more CUNCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP?  Septically for meeting the requirements of and for CUWCC reporting of this BMP?  18 Your Agency Performing Website Updates?  19 Your Agency Performing Website Updates?  Enter the name(s) of the wholesale agency (comma delimited)  19 Your Agency Performing Website the CONSTANT CONTROL OF STANT CONTROL OF STAN	OYes ONo		ater efficiency tips		e or brake the budget into discrete ne entry.	ents	of dues	labor	wages		
	recy Performing Website U  C wholesale agencies agree to and the requirements of and for of the wholesale  Imited)  RV  Imited)  RV  In (website address):  Four water conservation r agency's website that herear:  The Update take place during of the control of t	Is a Wholesale Agency Performing Website Upid one or more CUWC wholesale agencies agree to a responsibility for meeting the requirements of and for or more CUWC wholesale agencies agree to a responsibility for meeting the requirements of and for or comma delimited)  Is Your Agency Performing Website Updates?  Enter your agency's URL (website address):  Describe a minimum of four water conservation related updates to your agency's website that took place during the year:  Did at least one Website Update take place during Opeach quarter of the reporting year?  Public Outreach Annual Budget  Enter budget for public outreach programs. You may exategories by entering many rows. Please indicate if percreases by entering many entering many entering many entering many entering many entering with the percreases and for the percreases and for the percreases.	pdates? assume your agency's CUWCC reporting of this BMP? VA	va.net	t, hew, lawn removal, w	Yes ONo	nter total budget in a single line rsonnel costs are included in th	Personnel Costs Included? Comments	30 % of dues	actual labor	2% of wages		

The fields in red	are required.	Primary con		
	Agency name: Placer County Wat	er Agency First name:	Harley	Click here to open a table that displays your agency name
AL	Reporting unit name (District name) Zone 1	Last name:	Lukenbill	reporting unit name and reporting unit number. Please
ידי ייח	Reporting unit number: 271	Email: hlul	kenbill@PCWA.net	ensure that you enter the correct information.
	271			
CUWCC				
	Y DMD 2.2.0		D 1 11 A	Link to FAQ
	MP 2.2 S	School Education Progr	rams, Retail Agencie	S View MOU
20	School P	rograms		
		agency implementing school progo your agency comply with this B		OYes ONo
		, , , , , ,	Roseville Cal Ameri	ican
	Enter Wholesal	er Names, separated by commas	S: Troseville, Gai 7 (men	locari -
	✓ Materials me	eet state education framework re	quirements?	· · · · · · · · · · · · · · · · · · ·
				her materials, water maps,contests
	Description of N	1aterials		materiale, water mape, contests
	☑ Materials dis	stributed to K-6 Students?		
	Description of n Students	naterials distributed to K-6		
	Number of stud	lents reached		7
	✓ Materials dis	stributed to 7-12 Students?		
	Description of n Students	naterials distributed to 7-12	none	
	Number of Dist	ribution		7
	Annual budget	for school education program	\$20,000.00	Ī
	· · · · · · · · · · · · · · · · · · ·	· -		in an advertism. Place Nations Courter
	Description of a programs	all other water supplier education	RVVA, American Ri	iver education, Placer Nature Center
	O also al De			
		rogram Activities		
	Classroom pre		Number of 30	
	presentations	50	attendees 30	
	Large group a	ssemblies:		
	Number of pres		Number	of attendees 600
	Children's wa	ter festivals or other events:		
	Number of pres	sentations 1	Number	of attendees 500
	Coonsustines	ffeets with switting science (	water education programs	s (various workshops, science fair awards

Number of presentations

10

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

317

Number of attendees

	ר מ מ מ מ מ					
Number distributed Staffing children's	ed 317	Number distributed 317  Staffing children's booths at events & festivals:	 		1	
Number of booths Water conservati	1S <b>ation conte</b>	Number of booths 2 8 Water conservation contests such as poster and photo:	ter and photo:	Number of attendees	160	
Description	Califor	California Sate fair				
Number distributed	ed 160					
Number Offered	/ awards/1	Orter monetary awards/funding or scholarships to students:  Number Offered  0	arsnips to stud	gents: Total Funding	0	
Teacher training workshops:	ıg worksho	:sdc				
Number of prese	presentations	0		Number of attendees	0	
Fund and/or st etc.:	aff studen:	t field trips to t	reatment facili	or staff student field trips to treatment facilities, recycling facilities, water conservation gardens,	ater conservation gardens	JS,
Number of tours trips	tours or field	Number of tours or field 0		Number of participants	0	
Number of internships	ships			Total funding	0	
Career fairs/workshops:	orkshops:					
Number of prese	presentations	0		Number of attendees	0	
Additional prog	gram(s) su	pported by age	ncy but not me	program(s) supported by agency but not mentioned above:	ſ	
Description	Be wa	Be water Smat Challenge	llenge			
Number of events (if	S (if	7		of the control of the	100	
applicable)		-		Number of participants	424/	
Total reporting (include all ago	period bu	idget expenditu ):	res for school o	Total reporting period budget expenditures for school education programs (include all agency costs):	23000	

The fields in red a	are required.		Primary contact:
	Agency name:	Placer County Water Agency	First name: Harley
A 4	Division name (Reporting unit)	Zone 1	Last name: Lukenbill
11 1 Tr	Reporting unit nu	mber: 271	Email: hlukenbill@PCWA.net



### **WATER SOURCES**

2010

Service Area Population: 8326	9		
Potable Water			
Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Rivers and Lakes (PG&E)	38,455.00	Surface	treated water into Zone 1
		Other	
		_	
Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Other	
Exported Water Name	AF/YEAR	Where Exported?	
interties to others	10,568.00	Lincoln, cal am, other small բ	ourveyors

The fields in red a	are required.		Primary contact:
	Agency name:	Placer County Water Agency	First name: Harley
Ad	Division name (Reporting unit)	Zone 1	Last name: Lukenbill
ידו יודי	Reporting unit nu	mher: 271	Email: hlukenhill@PCWA net

# Water Uses

CUWCC

2010

### **Potable Water Billed**

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
	27,598.00	15,556.00			
	677.00	1,959.00			
Commercial	1,703.00	3,044.00			
Industrial	1.00	414.00			
Institutional	153.00	1,178.00			
Dedicated Irrigation	479.00	1,910.00			
Other	1,684.00	420.00			ciduws,const hyd,fire prot,no demand
Other					

## Potable Water Un-Billed

Customer Type	Meter Accounts	Water Delivered	Un-metered Accounts	Un-metered Description Water Delivered	
Other					

The fields in re	Agency name:  Reporting unit name (District name)  Reporting unit number:  Placer County Water A  zone 1  Reporting unit number:	Agency	Fir	mary contact: st name: harley st name: lukenbil nail: hlukenbill@p		You must enter the reporting unit that we have on record for your agency in order to process a coverage report. Click here to open a table to obtain this number.
20	BMP 1.1 Op Wholesale agency				<sup>-</sup> Wholesa	View MOU  lers
a	. Financial Investments and Build	ling Partne	rships			
	List the total monetary amount of financial incor to otherwise support, implementation of BN and maximize economies of scale benefits.  BMP Section and/or Sub-section Name			gional partnership		ge resource conservation
	no support requested		\$0.00		\$0.00	
I			onal Water Autho	prity		
C	Supply a summary of types of technical support provided to retail agencies  C. Program Management  If your wholesale agency has assumed reporting responsibility, list the programs managed on behalf of the retail agencies.	Retail Agenc Lincoln Cal American		Program Name  water efficie  water efficie		

1 of 2

Questions? office@cuwcc.org

#### d. Water Shortage Allocation

If a water shortage allocation plan or policy has been developed, provide the date of adoption and electronic link to the document or hardcopy.

2/01/2005	
ate Format: 05/15/2010	

Enter the file name of the document. Send it to natalie@cuwcc.org

### e. Non-signatory Reporting

Receipt of reports

#### none

Enter the file name of the document. Send it to natalie@cuwcc.org

### f. Encourage CUWCC Membership

List of efforts to recruit retailers and amount of dues paid on behalf of retail agencies.

#### all members

Enter the file name of the document. Send it to natalie@cuwcc.org

Primary contact:

Agency name: Placer County Water Agency

First name: Harley

Reporting unit name

Last name: Lukenbill

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Reporting unit number: 271

Email: hlukenbill@PCWA.net

Link to FAQs

BMP 1.2	View MOU
201 BMP 1.2 Water Loss Control	
AWWA Water Audit	
Agency to complete a Water Audit & Balance Using The AWWA Software O Yes O No Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:	
2009 PCWA Water Audit beta	
Water Audit Validity Score from AWWA spreadsheet 55	
Agency Completed Training In The AWWA Water Audit Method  Agency Completed Training In The Component Analysis Process  Yes  No	
Completed/Updated the Component Analysis (at least every 4 years)? O Yes O No Component Analysis Completed/Updated Date	
Water Loss Performance	
Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective $\bigcirc$ Yes $\bigcirc$ No	
Recording Keeping Requirements:	
Date/Time Leak Reported  Type of Leaking Pipe Segment or Fitting  Leak Running Time From Report to Repair  Leak Volume Estimate  Cost of Repair	
Agency Located and Repaired Unreported Leaks to the Extent Cost Effective O Yes O No  Type of Program Activities Used to Detect Unreported Leaks	
Leak survey with amplified ground microphone and leak corrolators	
Annual Summary Information  Complete the following table with annual summary information (required for reporting year	s 2-5 only)

Comments:

Cost of interventions is the cost to repair all water leaks

Economic

Value Of

Apparent Loss

Economic

Value Of

Real Loss

Total

Leaks

194

Repaired

Miles Of

Leaks

16

System Surveyed For

Pressure Reduction

Undertaken for loss

reduction

Cost Of

\$542,412.00

Interventions

8.15

Water

Saved

(AF/Year)

The fields in red are requ	ired. acer County Water Agency	Primary contact:	You must enter the reporting unit number	
Agency name: Reporting unit nam		First name: Harley		that we have on
(= 1 <sup>1</sup> + 1 + 1 )	one 1	Last name: Lukenbill		record for your agency. Click here to
Reporting unit nur	mber: 271	Email: hlukenbill@P0	CWA.net	open a table to obtain this number.
. 44.			• 4	Link to FAQs
400	2 1.3 Metering wit			
201	0	Se	ee the complete	MOU: View MOU
CUWCC	See	the coverage requ	uirements for this	BMP:
Implementation				
Does your agency ha	ave any unmetered service connection	ons?	○Yes ○No	
If YES, has your a	agency completed a meter retrofit pl	lan?		
Enter the number during reporting y	of previously unmetered accounts fivear:	itted with meters		
Are all new service of	onnections being metered?		○Yes ○No	
Are all new service of	onnections being billed volumetricall	y?	○Yes ○No	
Has your agency con written plan, policy o	npleted and submitted electronically or program to test, repair and replac	to the Council a e meters?	○Yes ○No	
Please Fill Out The	Following Matrix			
Account Type	. ioto. ou // i iotor ou / tocourtes	Metered Accounts Billed Volume	d by Billing Frequen Per Year	
	Accounts Read 27,598 17,598	17,598	Bi-monthly	bills/yr
Multi-Family	677	677	Bi-monthly	6
	1,703	1,703	Bi-monthly	6
	1 153 153	153	Monthly Bi-monthly	6
	479 479	479	Bi-monthly	6
	1,684	1,684	Other	6
Other			Other	
Other			Other	
Other			Other	
Number of CII Account	ts with Mixed-use Meters 1,857			
	nts with Mixed-use Meters Retrofitted on Meters during Reporting Period	0		
Feasibility Study	3 47 3 7 7	0		
Has your agency con-	ducted a feasibility study to assess t		to provide O Yes	O No
	mixed-use accounts to dedicated lan in the following information:	iuscape meters?		
	Feasiblity Study conducted			
B. Describe, upload	d or provide an electronic link to the	Feasibility Study Uploa	d File	
Eile nems (s): F	mail files to matalia@aa			
	mail files to natalie@cuwcc.org	Litter the me name no		reventionOrdinan
Web address(s)	URL: comma-separated list	nter the URL to your do	cumentation.	
	Comments:			

are required.		Primary contact:		Click here to open a table that			
	acer County Water Ag	ency First name: Harley		displays your agency name			
eporting unit nam District name)		Last name: Lukenb	ill	reporting unit name and reporting unit number. Please			
eporting unit nur	nber: 271	Email: hlukenbill@	PCWA.net	ensure that you enter the correct information.			
	2.11						
					Link to EAOs		
	DMD 2.4 Dk	olic Outreach			Link to FAQs		
10	DIVIF 2.1 Fut	one Outreach			View MOU		
		performing Public Outreach nore retail agencies that count on y	_		○Yes ○No		
	Enter the nam (comma delim	e(s) of the retail agency ited)					
	Is your agency	performing public outreach?					
	Report a minimum	of 4 water conservation related co	ontacts your age	ncy had with the public during the year.			
	Public Informat			ntact take place during reporting year?			
	Number of Public Contacts			Public Information Programs			
	4	General water conservation infor	mation				
	10	Newsletter articles on conservati	on				
	6	Newsletter articles on conservati	on				
		Select a public contact					
		Select a public contact					
	Contact with th	ne Media Are there one or mor BMP?	e retail agencies	that count on your agency to help them	comply with this		
				OYes ONo			
	Enter the name (comma delim		WA				
	OR Wholesale	Agency (Contacts with the M	du	d at least one contact take place ring each quarter of the reporting ar?			
	Number of Media Contacts	Did at least one contact take pleach quarter of the reporting y		Media Contact Types			
	12	Articles or stories resulting from o	utreach				
			/pe of media contact				

Select a type of media contact

Is a Wholesale Agency Performing Website Updates?  Did one or more retail agencies rely on your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP?  Oyes ONo	Enter the name(s) of the retail agency (comma delimited)	Is Your Agency Performing Website Updates?	er your agency's URL (website address):	Describe a minimum of four water conservation related updates to your agency's website that took place during the year:	Did at least one Website Update take place during OYes ONo	<b>Public Outreach Annual Budget</b> Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.	ategory Amount Personnel Costs Included? Comments If yes, check the box.	\$10,000	ew actual labor	kenbill \$2,000		
Is a Wholesale Agenc Did one or more retail age responsibility for meeting t	Enter the name(s) of th (comma delimited)	Is Your Agency Perfor Updates?	Enter your agency's URL (	Describe a minimum of for related updates to your ag took place during the year	Did at least one Website Leach quarter of the reporti	Public Outreach Annu Enter budget for public out categories by entering man	Category	RWA \$10,0	crew \$2,65	lukenbill \$2,00		

he fields in re	d are required.	Primary conta		
	Agency name: Placer County Water Agence	cy First name: H	arley	Click here to open a table that displays your agency name
A.L.	Reporting unit name (District name)  Zone 1	Last name:	ukenbill	reporting unit name and reporting unit number. Please
יין יי	Reporting unit number: 271	Email: hluke	nbill@PCWA.net	ensure that you enter the correct information.
	211			
UWCC				
	- PMD 2.2 Cebeal	Education Droger	ma Dotail Agonaia	Link to FAC
	BIVIP 2.2 SCHOOL	_	ıms, Retail Agencie	S View MOU
	School Progra	ms		
		nplementing school progra ency comply with this BMI		OYes ONo
			Roseville, Cal Ameri	can
	Enter Wholesaler Name	s, separated by commas:	Troodvine, Gai 7 anon	
	✓ Materials meet state	education framework requ	uirements?	
		·		ner materials, water maps,contests
	Description of Materials		Supplements, todal	ioi materiale, water maps, comedie
	✓ Materials distributed	to K-6 Students?		
	Description of materials	distributed to K-6		
	Students			
	Number of students rea	ched		
	✓ Materials distributed	to 7-12 Students?		
	Description of materials	distributed to 7-12	none	
	Students			
	Number of Distribution			
	Annual budget for school	ol education program	\$20,000.00	
	·	water supplier education	RWA, American Ri	ver education, Placer Nature Center
	programs			
	School Progra	m Activities		
	Classroom presentati			
	Number of 5	0	Number of 30	
	presentations		attendees 130	
	Large group assembl	ies:		
	Number of presentation:	s 1	Number	of attendees 600
	Children's water fest	vals or other events:		
	Number of presentation	s 1	Number	of attendees 500
	Cooperative efforts wor judging) and follow		ater education programs	(various workshops, science fair awards

10

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Number of presentations

317

Number of attendees

Description	Placer N	Placer Nature Center		
Number distributed 317	317			1
Staffing children's	booths a	Staffing children's booths at events & festivals:		
Number of booths		2	Number of attendees	160
Water conservatio	n contest	Water conservation contests such as poster and photo:	hoto:	
Description	Californ	California Sate fair		
Number distributed 160	160			1
Offer monetary aw	/ards/fun	Offer monetary awards/funding or scholarships to students:	students:	
Number Offered		0	Total Funding	0
Teacher training workshops:	orkshop:	is:		
Number of presentations		0	Number of attendees	0
Fund and/or staff	student 1	field trips to treatment	Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens,	ater conservation gardens,
Number of tours or field trips		0	Number of participants	0
College internship	s in wate	College internships in water conservation offered:		
Number of internships		0	Total funding	0
Career fairs/workshops:	shops:			
Number of presentations		0	Number of attendees	0
Additional prograr	dns (s)u	Additional program(s) supported by agency but not mentioned above:	ot mentioned above:	
Description	Be wate	Be water Smat Challenge		
I				
Number of events (if applicable)	<u>'</u>	_	Number of participants	4247
Total reporting pe (include all agenc	riod budς γ costs):	get expenditures for sch	Total reporting period budget expenditures for school education programs [include all agency costs):	23000

The fields in red are required.		Primary contact:
Agency name	Placer County Water Agency	First name: Harley
Division name (Reporting unit	Zone 1	Last name: Lukenbill
Reporting unit i	number: 271	Email: hlukenbill@PCWA.net



### **WATER SOURCES**

2010

Service Area Population: 8326	9		
Potable Water			
Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Rivers and Lakes (PG&E)	38,455.00	Surface	treated water into Zone 1
		Other	
mported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Other	
Exported Water Name	AF/YEAR	Where Exported?	
nterties to others	10,568.00	Lincoln, cal am, other small	nurvevors
		Elifooni, caram, carer oman	parvoyoro

ppendix C-1 MWELO Summary
acer County Water Agency 10 Urban Water Management Plan lopted June 16, 2011

### **MWELO Summary**

### **California Model Water Efficient Landscape Ordinance**

In 2006, the California Legislature enacted, and the Governor signed, the Water Conservation in Landscaping Act (Gov. Code §§ 65591-65599), which requires the Department of Water Resources to update the Model Water Efficient Landscape Ordinance (MWELO). On September 10, 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which requires that a local agency adopt the provisions of the MWELO by January 1, 2010. Because Placer County is a "local agency" under the MWELO, it must require "project applicants" to prepare plans consistent with the requirements of MWELO for review and approval.<sup>1</sup> It is important to note that "local agency" has the authority to designate PCWA or another agency responsibility over the implementation of some or all of the provisions of MWELO.<sup>2</sup>

The provisions of the MWELO are applicable to:

- New construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area greater than 2,500 square feet requiring a building or landscape permit, plan check or design review;<sup>3</sup>
- New construction and rehabilitated landscapes which are developer-installed in single-family and multi-family projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;<sup>4</sup>
- New construction landscapes which are homeowner provided and or homeowner hired in single-family and multi-family residential projects with a total project landscape area equal to or greater than 5,000 square feet requiring a building or landscape permit, plan check or design review;<sup>5</sup>
- Existing landscapes installed before January 1, 2010 and greater than an acre in size.

The MWELO provision likely to have a significant effect on the new and rehabilitated landscapes greater than 2,500 and 5,000 square feet respectively (#1-3 above) is the preparation of a Landscape Design Plan with a water budget that is 70% of reference

<sup>5</sup> *Id*.

<sup>&</sup>lt;sup>1</sup> "Local Agency" means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project. CCR Tit. 23, Sec. 491(ii).

<sup>&</sup>lt;sup>2</sup> CCR Tit. 23, Sec. 492(a) and 493(a)

<sup>&</sup>lt;sup>3</sup> CCR Tit. 23, Sec. 490.1.

<sup>&</sup>lt;sup>4</sup> *Id*.

evapotranspiration.<sup>6</sup> As for the landscapes installed before January 1, 2010 greater than one acre in size (#4 above), for the landscapes with a water meter, the local agency is to conduct analyses, surveys and audits in an attempt to reduce water use to 80% of reference ETo.<sup>7</sup> For those landscapes greater than one acre without a meter, a local agency shall administer water conservation programs designed to prevent waste.<sup>8</sup>

The MWELO also "highly recommends" use of a dedicated landscape meter on landscape areas smaller than 5,000 square feet, and requires weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems. The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency. Finally, the MWELO requires the landscape design plan to delineate hydrozones (based upon plant factor) and then assign a unique valve for each hydrozone (low, medium, high water use).

It is difficult to predict the ultimate impact of the MWELO requirements on water demand. While the requirement is for development of a landscape design plan that uses plants and features that are estimated to use no more than 70% of ETo, some provision must be made for the inherent tendency to overwater even with irrigation controllers installed, piecemeal changes in landscape design, reductions in irrigation efficiency through product use, and limited resources for enforcement in the absence of dedicated irrigation meters.

For these reasons, outdoor water use may more reasonably be 85% ETo over a long-term period. 85% of ETo was selected based on a study that supports the assumption that customers tend to apply 16% more water to the landscape than it actually needs. While weather-based irrigation controllers may reduce this number such that only about 2% more water is being applied than is needed, some consideration needs to be made for the factors described above that will impact water use, outside of a controlled study, even

<sup>&</sup>lt;sup>6</sup> CCR, Tit. 23, Sec. 492.4. The MWELO has an exception for "Special Landscape Areas (SLA)," which are defined as a landscape area dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface. The SLAs can have a water demand of 100% of ETAF in the maximum applied water calculation.

<sup>&</sup>lt;sup>7</sup> CCR, Tit. 23, Sec. 493.1.

<sup>8</sup> Id.

<sup>&</sup>lt;sup>9</sup> CCR Tit. 23, Sec. 492.7(a)(1)(A)-(B).

<sup>&</sup>lt;sup>10</sup> In calculating Estimated Total Water Use, the MWELO requires use of at least a 71% irrigation efficiency factor. Assuming 71% irrigation efficiency, the average plant factor must be 0.50. It would be possible to stay within the water budget if the average plant factor were higher than 0.50 by designing a system with an irrigation efficiency higher than 71%. Again the relationship between a Plant Factor (PF) and Irrigation Efficiency (IE) in the Applied Water formula is: AW=(ETo\*PF)/IE.

<sup>&</sup>lt;sup>11</sup> CCR Tit. 23, Sec. 492.3(a)(2)(A) and 492.7(a)(2).

<sup>&</sup>lt;sup>12</sup> http://www.irwd.com/Conservation/FinalETRpt[1].pdf.

when using a weather-based irrigation controller. These factors will likely result in overuse somewhere between 2% and 16%. Given the uncertainty regarding these impacts, the "overuse" percentage of 16% was used to adjust the MWELO Landscape Plan requirement of 70% of ETo.<sup>13</sup>

.

 $<sup>^{13}</sup>$  Dividing 70% by 84% (difference between 1.0 and .16) results in an adjusted figure of approximately 85%.

ppendix C-2	Cal Green	Building C	Code		
cer County Water 10 Urban Water M	· A ganay				_

# **Cal Green Building Code**

# **Indoor Infrastructure Requirements**

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CAL Green Code), which will require the installation of water-efficient indoor infrastructure for all new projects beginning on January 1, 2011. The CAL Green Code is currently incorporated into Title 24 of the California Code of Regulations (CCR). The CAL Green Code will apply to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure. Future development projects in the PCWA service area are likely to include new "buildings and structures," as defined under the CAL Green Code, and the projects will therefore need to satisfy the indoor water use infrastructure standards necessary to meet the CAL Green Code.

The CAL Green Code requires <u>residential</u> and <u>nonresidential</u> water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use in the building by 20%. The 20% water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20% reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20% reduction in water use from the building "water use baseline."<sup>2</sup>

<sup>1</sup> 

<sup>&</sup>lt;sup>1</sup> The CAL Green Code is Part 11 in Title 24 on January 1, 2011. All references in the UWMP will be to the Chapter and Section numbers that appear in the document which may be obtained by visiting the California Building Standards Commission web site at: http://www.documents.dgs.ca.gov/bsc/CALGreen/2010 CA Green Bldg.pdf

<sup>&</sup>lt;sup>2</sup> For Residential construction, Section 4.303.1 provides the residential water conservation standard and Table 4.303.2 identifies the infrastructure requirements to meet this standard. Table 4.303.1 and Worksheets WS-1 and WS-2 are to be used in calculating the baseline and the reduced water use if Option 2 is selected. For non-residential construction, Section 5.303.2 provides the water conservation standard as well as the baseline and reduced flow rate infrastructure standards. Note that Worksheets WS-1 and WS-2 incorporate both residential and non-residential fixtures, yet the water use is still to be analyzed by "building or structure" as specified in Chapter 1, Section 101.3.

	ethods		
er County Water Agency ) Urban Water Management Plan		 	

#### **Calculation Methods Discussion**

#### **Land Use Classifications and Demand Factors**

The following section will describe the methods used to develop the land use classifications and the reasoning used as well as the demand factors for each land class. This will refer to a number of spreadsheet documents and explain the contents of those documents as a basis for information.

## **Water Conservation Objectives**

An "urban retail water supplier" is now required to select one of four water conservation targets specified in California Water Code § 10608.20(b) with the statewide goal of achieving a 20-percent reduction in urban per capita water use by 2020.<sup>1</sup> To accommodate development of the baseline water use and target numbers in CWC § 10608.20(b), an urban retail water supplier is allowed to adopt a 2010 UWMP as late as July 1, 2011. (CWC § 10608.20(j)).

As required by CWC § 10608.20, an urban water supplier's ultimate target will require reductions in per capita urban water use from past levels. To reach its ultimate target, an urban water supplier will probably need to institute water conservation measures in its existing service area, and also require new service areas to use efficient indoor infrastructure and landscape features. The state's intent is to achieve a statewide 20-percent reduction in urban per capita water use by 2020. The demand reduction should be reflected in the unit demand factors used by each urban water supplier.

#### -List of source documents used:

- ▶ PCWA Treated Retail Future Land Use Determination.xlsx
- Demand Sub-table.xlsx
- ♦ UWMP Demand Tables working file v2.xlsx
- Water Revenue and Sales Report (version 1).xlsx
- Conservation Worksheet.12.07.10.xlsx
- Residential DU distribution.xls

-PCWA Treated Retail – Future Land Use Determination.xlsx

This spreadsheet consists of build-out dwelling unit numbers from the 2006 PCWA IWRP. The numbers are provided for the types of housing supplied. These land use classifications include: High Density, Medium Density, Low Density, and Rural

<sup>&</sup>lt;sup>1</sup> An "urban retail water supplier" is a water supplier, ..., that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes. CWC § 10608.12(p).

Residential for residential housing and a number of types of non-residential use. **Table C-1** shows these types.

**Table C-1** – Dwelling Unit Categories

Table C-1 - Dwelling Officeate	gories
Residential	
High density 20.1+ DU/A	c.
High density 15.1-20 DU/	Ac.
High density 10.1-15 DU/	Ac.
Medium density 7.1-10 DU	J/Ac.
Medium density 5.1-7 DU	/Ac.
Low density 3.1-5 DU/Ac.	
Low density 1.1-3 DU/Ac.	
Low density 0.1-1 DU/Ac	
Rural Residential 1.1-2.3 A	Ac./DU
Rural Residential 2.31-4.6	Ac./DU
Rural Residential 4.61-10	Ac.DU
Rural Residential 10.1-20	Ac./DU
Non-Residiential	
Professional Office	
Commercial	
Industrial	
Public	

Table C-1. Land use Classifications for Connections.

#### -Demand Sub-table

This Spreadsheet consists of calculations for the demand for each land use class on a dwelling unit basis. The classes are as defined in **Table C-1**.

For Zone 1, using the Water Revenue and Sales Report, a number of current Dwelling Units (DUs) is applied to the table. Combined with sales and delivery data this allowed the calculation of existing demand factors. The DU values are then removed from the build-out numbers of Zone 1 as presented in Table 4-7 of the 2006 PCWA IWRP and split to represent the future DUs in upper and lower Zone 1. Building on this, the number of future high-density DUs is distributed among the three high-density land classes, with 90% of this development taking place in lower Zone 1. Upper zone 1 is expected to see only the lowest density class of high-density development. The DU numbers are combined with total sales numbers gives a calculated number for demand per DU. Demand values for nonresidential numbers are also taken from the 2006 IWRP. The percentage of reduction per DU class is described in **Table C-2** and is used to calculate the future demands for existing Zone 1 demands.

For Zone 3 and Zone 4 the table is simplified to account for the demands present in the zones. Zones 3 and 4 were calculated using sales data where use divided by the number

of connections yielded demand per connection or DU for residential use. These unit classes are simply defined as multi-family and single family connections. The implementation conservation measures will also cause a reduction in demand for existing connections. This effect is represented in a reduction of demand factors in the existing demand factor row on the "Demands tables". Both of the residential connection types are expected to only see a 5% efficiency increase per decade due to the new development in zone 4 which accounts for around half of the combined residential connections in these zones.

**Table C-2** – Conservation Reduction by Land Class

	2020 %	2030 % Reduction
Upper Zone 1	Reduction	(below 2020)
High density 15.1-20 DU/Ac.		
High density 10.1-15 DU/Ac.	5%	5%
Medium density 7.1-10 DU/Ac.	5%	5%
Medium density 5.1-7 DU/Ac.	10%	5%
Low density 3.1-5 DU/Ac.	10%	5%
Low density 1.1-3 DU/Ac.	10%	5%
Low density 0.1-1 DU/Ac	5%	5%
Rural Residential 1.1-2.3 Ac./DU	5%	5%
Rural Residential 2.31-4.6 Ac./DU	5%	5%
Rural Residential 4.61 Ac./DU and larger	5%	5%
Lower Zone 1		
High density 20.1+ DU/Ac.	5%	5%
High density 15.1-20 DU/Ac.	5%	5%
High density 10.1-15 DU/Ac.	8%	5%
Medium density 7.1-10 DU/Ac.	10%	8%
Medium density 5.1-7 DU/Ac.	10%	8%
Low density 3.1-5 DU/Ac.	10%	8%
Low density 3.1-5 DU/Ac. (PCWA GB)	15%	8%
Low density 1.1-3 DU/Ac.	10%	5%
Low density 1.1-3 DU/Ac. (PCWA GB)	15%	5%
Low density 0.1-1 DU/Ac	10%	5%
Rural Residential 1.1-2.3 Ac./DU	8%	5%
Rural Residential 2.31-4.6 Ac./DU	5%	5%
Rural Residential 4.61 Ac./DU and larger	5%	5%

#### *-UWMP Demand Tables*

This spreadsheet contains calculations for growth for each class based on data from other spreadsheets as well as assumptions in trending. The build-out numbers from the "Treated Retail" spreadsheet explained above are compared to existing numbers calculated in the "Demand sub-table" spreadsheet. Growth is estimated as a linear trend with build-out occurring beyond the timeframe of this UWMP. Growth rates are 3%, 1%, and 10% for zones 1,3 and 4 respectively. If build-out numbers limit growth of a certain land classification to less than the assigned percentage then linear growth with build-out occurring in 2045 is represented. More detail on this is provided in the following section in "Step 3" of "Developing Future Demand".

For Zone 1, future demand per DU is calculated by using numbers from the "Conservation worksheet" of future demand and adjusting demands to trend form

existing to the future number. Using the number of DUs and demand per DU the demand for each time step if calculated with a simple multiplication.

For Zone 3, future demand is borrowed from upper zone 1 values. Demand factors are as calculated in *Demand Sub-table*. Growth percentages are used to take DUs out to the planning threshold. Limited growth is expected in Zone 3 and reduction in existing DU demands are estimated limited due to minor landscaping and construction renovation to 5% per decade.

For Zone 4 the future demand projections were based off of buildout housing units and minor efficiency increases. Demand factors are as calculated in *Demand Sub-table*. Buildout housing units were gathered from developers' websites for projects that are planned to be served by Zone 4. This resulted in a total unit count of 1415 housing units. This number forces a lower growth rate of 2.6% to reach the 2030 buildout. And a lower demand than calculated in the 2005 UWMP. Since the houses are all built since 1998, they are assumed to only achieve 5% efficiency increases per decade. Future houses will be built with CalGREEN code and so are assumed to be 5% more efficient then current houses after two 5% demand reductions.

This demand is summed for all uses/zones and a total demand is developed for the retail treated service. Retail raw service is treated a flat number where appropriate. Future raw demands are expected to remain flat for zone 1 but are expected to drop to only area served outside of Lincoln SOI. Drop in Zone 5 land is a linear reduction from the current area beginning between 2015 and 2020. Wholesale demand is from a number of sources. There are two versions of wholesale demands as in dry years some deliveries are limited or stopped. Summing all of these demands gives a zone specific demand that in turn gives a calculation of total system demands.

### -Water Revenue and Sales Report

This spreadsheet contains billing information as presented by PCWA. This serves as the basis of information for a number of calculations. Data used on these sheets provides supply data to retail customers as well as resale data from a number of small water districts. There are also population estimates for these small water districts that are used as a reasonable population for these small area. This report serves as a basis for calculating proportions of water types, total water sales, loss when compared to treatment numbers, and connection numbers.

#### -Conservation Worksheet

This spreadsheet contains calculations for future demand factors. Existing indoor capita demand numbers were gathered from PCWA billing data and calculated by P. Selsky. These numbers are reduced by 10% to capture the effects of the green building standards code. Multiplication of this number and the number of persons per DU gives the indoor

demand per DU. Following the California Model Water Efficient Landscape Ordinance (MWELO) outdoor water use was calculated for upper and lower zone one using ETo numbers for Auburn and Roseville respectively. The outdoor and indoor numbers are then summed and compared to current demand factors.

#### -Residential DU distribution.xls

This spreadsheet contains the calculations distributing the existing residential DUs over the land classes. Using a combination of existing demand factors and current total sales information, the existing connections were distributed across the array of land-use classifications. The current number of DUs from the sales numbers were distributed over the land classes and a resulting demand per DU was calculated. The allocation of the DUs was adjusted in the table until the predicted demand numbers were within a range of the actual sales numbers. By adjusting the distribution until the calculated sales to residential customers was comparable to the 2009 data an estimated distribution was developed. Though the total calculated sales exceeded the 2009 sales, it was less than the 2008 or 2007 sales. As these estimates fall in a reasonable range of actual, it will be treated as a fair representation of the number of existing dwelling units in each classification.

## -Developing future demand.

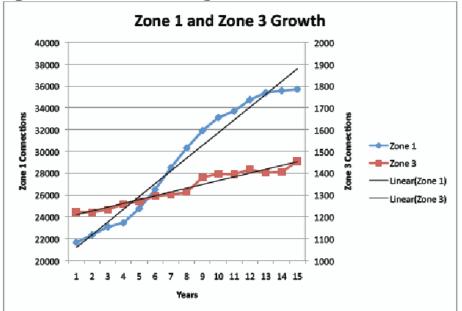
The spreadsheets listed above have connections between one another to reach calculated values. A summary of how these work together is summarized in the following section. There are 4 major steps in this process: developing current demand factors from current demand, estimating future demand factors, estimating the future growth rate, and calculating the future demand.

- The first step in developing future demand numbers is reviewing current data. For Zone 1 it was easy to look at current demand from the water sales report. This data provided demand numbers but not for specific land use classifications so land use classifications were taken from the build-out numbers used in step 4 as presented in the 2006 IWRP. These land use classifications are as presented in figure C-1. At this point two key assumptions were made: the percentage of build-out existing and the distribution of the two classes of residential demand over the twelve land use categories. These assumptions are discussed in the descriptions of the documents *Conservation Worksheet*, *Demand Sub-table*, and *Residential DU Distribution*. For Zone 4 the number of connections related to the number of DUs due to there only being 1 type of residential home in these developments.
- The second step is removed from the first step in that it is based off a different method of calculation and assumptions. These calculations have already been addressed in the documents described in this appendix section. The summary result is that future water demands will be lower for new connections due to more efficient plumbing design, more water efficient appliances, and more water

efficient landscaping. The policy drivers for these reductions are summarized in **Appendix C-1** and **Appendix C-2**. Reduction in existing demand will also fall slightly do some to these policies but also to natural attrition to new appliances and fixtures that are more efficient in general.

The third step in this process involves developing a growth rate for the various zones. Zone 4 is the most difficult as it is a small area with large houses. To match the build-out demand from the 2005 UWMP, build-out was moved from 2015 to 2035 and the 10% growth rate was adjusted to 14% to meet the buildout housing unit numbers by 2035. Zones 1 and 3 have more years of data and are larger areas and so demands can be more easily estimated. Figure C-1 below shows zone 1 and 3 connection numbers on proportional scales for a period of 15 years. Notice that both zones resulting linear trend lines follow the numbers fairly close.





Note that the linear growth rates for zones 1 and 3 are about 3.7% and 1.3 % respectively. Another important point is that the deviations result in connection estimates showing the largest deviation for Zone 1 in the most recent years due to the drop off of development with the average deviation being 3.73%. The Zone 3 linear estimate had a maximum deviation of 2.69% and an average of 1.16%. This shows that even with the sporadic growth due to the housing boom and collapse still result in realistic yearly percentage of growth with a linear model both are well within the error bounds for this project. The demand growth was modeled as linear due to the little error present in the sample period. This assumption will be refined with more data in the 2015 UWMP.

Build-out numbers were taken from the 2006 IWRP where they were calculated for sub areas in upper and lower Zone 1. These were summed over all of the areas to give build-out numbers for all of the land use classifications presented in **Figure C-1** above. Zone 1 growth is assumed to be at 3% for all land use categories where this growth would not exceed build-out numbers by 2045. The

3% value was chosen over the 3.7% for simplicity and to more accurately represent future growth. For categories where a 3% growth would exceed the total build-out number by 2045, a linear growth rate was assumed to reach that categories build-out by 2045. Zone 3 was simplified to 1% and followed the same linear growth buildout as Zone 1 for when percent growth exceeds totals for buildout.

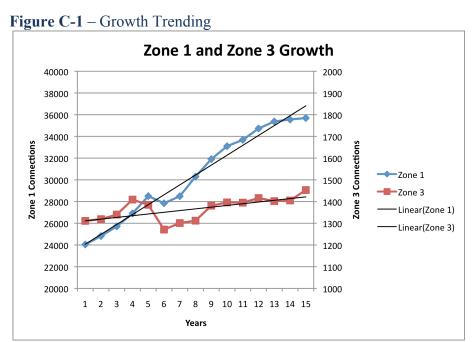
• The Fourth step is to calculate the future demand that is just a matter of calculation. A growth rate is applied to the number of DUs to get the users for each type for each time step. The current DUs are applied to the current demand factor and future conservation demand factors where new DUs are applied to the more efficient demand factors. The resulting demand numbers are then summed for all use classes and all zones to get total demand values.

#### **Population Estimation**

PCWA demand is based on connection numbers and potential growth. Due to the PCWA retail service not sharing boundaries with incorporated cities or other entities that maintain population estimations, getting useable population data is difficult. Countywide population numbers are available from the Department of Finance (DOF) but PCWA does not sell directly to all of Placer County. In complying with the standards of this UWMP a population analysis was completed from the 2000 census. This block level analysis produced a number of retail customers around 30% of the county population. The number of customers for 2000 was divided by the number of connections in 2000 to produce a ratio of persons per connection. While a decade of development likely shifted the ratio, this is the approved method by DWR. This number was then multiplied by the number of connections for each year through 2010 to estimate population. Since this analysis was completed it has been noted that the connection numbers for years 1995-1999 were incorrect when compared to the 2000-present numbers. This was due to a change in the record keeping of PCWA from pre 2000 to post 2000. To estimate the population of years 1995-1999 adjustments were made to the connection numbers to account for the record keeping change. To estimate the future population this same population to connection ratio was used. The previously described growth rates of various housing types were summed for each of the future five year increments. Different ratios were used for each of the Zones to reflect the different community types that are representative of different areas in the county. Using housing development numbers for different dwelling unit types in the different zones, future DU's to be added were multiplied to this population per connection to develop future population estimates,

pendix C-4 CUWCC	
er County Water Agency  Ourban Water Management Plan  pted June 16, 2011	

- **Appendix C-1** and **Appendix C-2**. Reduction in existing demand will also fall slightly do some to these policies but also to natural attrition to new appliances and fixtures that are more efficient in general.
- The third step in this process involves developing a growth rate for the various zones. Zone 4 is the most difficult as it is a small area with large houses. To match the build-out demand from the 2005 UWMP, build-out was moved from 2015 to 2035 and the 10% growth rate was adjusted to 14% to meet the buildout housing unit numbers by 2035. Zones 1 and 3 have more years of data and are larger areas and so demands can be more easily estimated. Figure C-1 below shows zone 1 and 3 connection numbers on proportional scales for a period of 15 years. Notice that both zones resulting linear trend lines follow the numbers fairly close.



Note that the linear growth rates for zones 1 and 3 are about 3% and 1 % respectively. Another important point is that the deviations in years 6 and 7 result in connection estimates within 4.3% and 6.1% of actual for zones 1 and 3 respectively and are well within the error bounds for this project. The demand growth was modeled as linear due to the little error present in the sample period. This assumption will be refined with more data in the 2015 UWMP.

Build-out numbers were taken from the 2006 IWRP where they were calculated for sub areas in upper and lower Zone 1. These were summed over all of the areas to give build-out numbers for all of the land use classifications presented in **Figure C-1** above. Zone 1 growth is assumed to be at 3% for all land use categories where this growth would not exceed build-out numbers by 2045. For categories where a 3% growth would exceed the total build-out number by 2045, a linear growth rate was assumed to reach that categories build-out by 2045.

• The Fourth step is to calculate the future demand that is just a matter of calculation. A growth rate is applied to the number of DUs to get the users for each type for each time step. The current DUs are applied to the current demand factor and future conservation demand factors where new DUs are applied to the more efficient demand factors. The resulting demand numbers are then summed for all use classes and all zones to get total demand values.

#### **Population Estimation**

PCWA demand is based on connection numbers and potential growth. Due to the PCWA retail service not sharing boundaries with incorporated cities or other entities that maintain population estimations, getting useable population data is difficult. Countywide population numbers are available from the Department of Finance (DOF) but PCWA does not sell directly to all of Placer County. In complying with the standards of this UWMP a population analysis was completed from the 2000 census. This block level analysis produced a number of retail customers around 30% of the county population. The number of customers for 2000 was divided by the number of connections in 2000 to produce a ratio of persons per connection. This number was then multiplied by the number of connections for each year through 2010 to estimate population. While a decade of development likely shifted the ratio, this is the approved method by DWR. To estimate the future population this same ratio was used. The previously described growth rates of various housing types were summed for each of the future five year increments. These sums were then multiplied by the persons per connection value to estimate a population number. Different ratios were used for each of the Zones to reflect the different community types that are representative of different areas in the county. Countywide population was gathered from DOF tables for the future county population number. The DOF tables only have ten year increments for population estimation so linear interpolation was used to arrive at the intermediate estimates.

## California Urban Water Conservation Council Best Management Practices

Some of the CUWCC BMPs that support using per unit demands that are lower than such demands in the PCWA's existing service area include Landscape Surveys (BMP 3), which could be designed for PCWA in such a way as to try to ensure the MWELO Landscape Design requirements remain in place in the field.<sup>1</sup> BMP 3 also requires interior surveys for Single and Multi-Family Residential customers, which could help determine whether customers are continuing to use water-efficient indoor appliances (e.g., those meeting the CAL Green Code specifications), and would also provide an opportunity for PCWA to tailor its incentive programs to encourage continued use of water-efficient appliances.<sup>2</sup>

Also, the CUWCC recommends identifying opportunities for installation of dedicated irrigation meters, monitoring progress through billing, and then providing site-specific assistance for accounts 20% over budget. (CUWCC BMP 5) Taking the CUWCC recommendation one step further, the recently adopted CAL Green Code requires installation of separate meters or submeters in nonresidential construction landscapes that are between 1000 and 2500 square feet. Thus, irrigation submeters will be in place at many, if not all, nonresidential sites. The PCWA can use this meter data and provide site-specific assistance which should help maintain a level of water use consistent with its water use planning assumptions.

Also, as a signatory to the CUWCC MOU, the PCWA commits to conducting public information campaigns and school education programs.<sup>3</sup> These educational campaigns will help reinforce water conservation oriented behavior in the PCWA, which can help minimize year-round water use indoors and moderate outdoor use during the peak irrigation season.

Two additional BMPs that will help moderate water demands associated with future water service connections in the PCWA service area are (1) the use of a water conservation coordinator, and (2) enactment and enforcement of a water waste

<sup>&</sup>lt;sup>1</sup> CUWCC BMP 3 provides that MOU signatories should perform site-specific landscape water surveys that shall include checking the irrigation system and timers for maintenance and repairs; estimating landscaped area; and developing a customer irrigation schedule based on precipitation, climate and landscape conditions.

<sup>&</sup>lt;sup>2</sup> CUWCC BMP 3 specifically provides that an MOU signatory should offer site-specific leak detection assistance, including a water conservation survey, water efficiency suggestions and/or an inspection, as well as providing WaterSense rated showerheads and faucet aerators.

<sup>&</sup>lt;sup>3</sup> CUWCC BMP 2.1 provides that a signatory should "Implement a public information program to promote water conservation, including providing speakers to employers and at public events, providing information on customers' bills showing use for the last billing period compared to the same period the year before." This BMP also requires a messaging campaign. BMP 2.2 requires implementation of a school education program to promote water conservation, including working with schools to provide instructional assistance, educational material and classroom presentations.

ppendix C-5	<b>Baseline M</b>	ethod 4		
cer County Water A O Urban Water Ma opted June 16, 201	Agency magement Plan			

# **Baseline Method 4 Analysis Discussion**

Calculating the Method 4 baseline is done by using the Method 4 Calculator Provided by DWR. Method 4, as defined by DWR, is an ongoing development which should see an update provided by 2014 with a final version by Dec 31, 2020<sup>1</sup>. This method is only the current revision but provides two different options. The first is to use assumptions built into the calculator from statewide analysis. The second is to do in depth analysis for the service area. Since doing in depth analysis is not appropriate for a service area of the size of PCWA the DWR assumptions will be used. Using these assumptions the following reductions are expected by 2020:

- Default indoor savings of 15 gpdc based on indoor use of 70 gpdc
- 20% savings for all connections in the middle of the base period
- 10% savings for all CII use
- Landscape and Water Loss savings of 21.6%

This method also requires the population and CII usage in the middle of the selected base period. This means that a highly variable CII use could change the resulting goal depending on the year chosen as the middle of the base period. For PCWA the base period was 1999-2008 as described in **Chapter 4**.

The following sheet shows the targets and reductions expected for PCWA using method 4. It should be noted that these results are only slightly higher than the method 1 target of 228 gpdc but may change as this method is refined. If the final version of this method produces a target lower than the method 1 target, PCWA always has the option to switch to that target.

\_

<sup>&</sup>lt;sup>1</sup> § 10608.20 (b)(4)

prohibition.<sup>4</sup> The PCWA currently has a water conservation coordinator but Placer County has not adopted water waste ordinance. Placer County Code section 8.28.090 lists "landscape irrigation and lawn watering" as an exemption to prohibited discharge into stormwater systems. The implementation of an ordinance reversing this would be a source of reduction to PCWA so long as the county enforces this or grants PCWA the authority to enforce.

The CUWCC BMPs should have a long-term impact on the PCWA's ability to manage water use throughout its service area. Through targeted outreach, the PCWA can encourage continued customer use of highly efficient appliances and irrigation systems, emphasize the need to retain efficient landscape plantings, and also minimize otherwise wasteful uses. The PCWA's commitment to implementing these agreements should help maintain water use efficiency. Implementation of the CUWCC BMPs in the PCWA service area will ensure that the PCWA maintains the lower than historic unit demand factors.

.

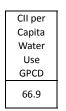
<sup>&</sup>lt;sup>4</sup> CUWCC BMP 1.1(A) provides that a signatory shall designate a person as the agency's responsible conservation coordinator for program management. BMP 1.1(A) also requires a signatory to enact, enforce or support ... ordinances ... that (1) prohibit water waste ... and (2) address irrigation, landscape, and industrial, commercial, and other design inefficiencies.

# **Target Calculation -- Provisional Method 4 Target**

# Step 1. Calculation of Landscape Water Use and System Water Loss

Urban Supplier	1995-2004 Baseline GPCD
Placer County Water Agency	298.0





Estimated
Landscape
Water Use and
System Water Loss
GPCD
161.1

### Step 2. Calculation of Savings Using BMP Calculators

#### (Alternate) STEP 2 BEING USED TO CALCULATE TARGET

Urban Supplier	Indoor Residential Savings Calculators					
	Single Family Toilets	Multi Family Toilets	Resi- dential Washers	Resi- dential Showers	Total IR Savings	
Placer County Water Agency	XXXX	XXXX	XXXX	XXXX	XXXX	

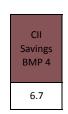




### (Alternate) Step 2. Calculation of Savings Using Default Indoor Residential Savings

	Default
Urban Supplier	
	Resi-
	dential
	Indoor
	Savings
Placer County Water	15.0
Agency	15.0





+

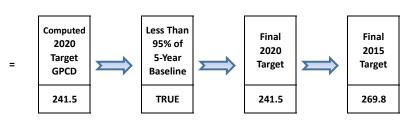




## **Step 3. Calculation of Urban Water Use Targets**

Urban Supplier	1995-2004 Baseline GPCD
Placer County Water Agency	298.0





=

Appendix D-1	Water Rights Licenses	
Placer County Water	Agency	

P 13256

# STATE OF CALIFORNIA CAIFORNIA ENVIRONMENTAL PROTECTION AGENCY STATE WATER RESOURCES CONTROL BOARD

# **DIVISION OF WATER RIGHTS**

# **ORDER**

Application 18085 Permit 13856

# ORDER APPROVING CHANGE IN THE PLACE OF USE, AND AMENDING THE PERMIT

#### WHEREAS:

- 1. Permit 13856 was issued to Placer County Water Agency on January 10, 1963, pursuant to Application 18085.
- 2. A petition to change the place of use of Permit 13856 was filed with the State Water Resources Control Board (SWRCB) on July 31,1996 and the SWRCB has determined that good cause for such change has been shown. Public notice of the change was issued on October 18, 1996 and protest issues have been resolved. Resultant protest resolution agreements have been incorporated into this order.
- 3. The SWRCB has determined that the petition to change the place of use does not constitute the initiation of a new right nor operate to the injury of any other lawful user of water.
- 4. Fish, wildlife, and plant species have been or may be listed under the federal Endangered Species Act and/or the California Endangered Species Act. A paragraph should be placed in the permit making the permittee aware of possible obligations resulting from these acts.
- 5. The paragraph relating to the continuing authority of the SWRCB should be updated to conform to section 780(a), title 23 of the California Code of Regulations.

# NOW, THEREFORE, IT IS ORDERED THAT:

1. The place of use under Permit 13856 shall be amended as follows:

The place of use is situated in portions of Placer and Sacramento counties as shown on the Placer County Water Agency map set dated July 31, 1996, on file with the SWRCB.

2. Paragraph 8, the continuing authority condition, shall be updated to read as follows:

Pursuant to California Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this permit, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the SWRCB in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the SWRCB may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to:

(1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirement for the authorized project. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the SWRCB also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution article X, section 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust. (0000012)

3. An Endangered Species term shall be added to Permit 13856 to read as follows:

This permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

3. The following term shall be added to Permit 13856 to read as follows:

Permittee shall comply with provisions of the following settlement agreements on file with the SWRCB:

- (a) Agreement for Dismissal of Protest by California Department of Water Resources to Placer County Water Agency's Petition before State Water Resources Control SWRCB for Change in Place of Use under Permits Nos. 13856 (App. No. 18085) and 13858 (App. No. 18087) executed on September 30, 1999;
- (b) Stipulated Agreement for Dismissal of Bureau of Reclamation's Protest to Placer County Water Agency's Petition to Expand the Place of Use Under Application 18085 (Permit 13856) and Application 18087 (Permit 13858) executed on September 8, 1998;
- (c) SETTLEMENT AGREEMENT CONCERNING PLACER COUNTY WATER AGENCY'S PETITION TO EXPAND ITS PLACE OF USE UNDER WATER RIGHT PERMITS 13856 AND 13858 executed between Placer County Water Agency and the County of Sacramento (on March 23, 1999); as well as the City of Sacramento (on April 13, 1999); and
- (d) Stipulated Agreement for Dismissal of Protest to Placer County Water Agency's Petition to Expand the Place of Use Under Application 18085 (Permit 13856) and Application 18087 (Permit 13858) executed between the Placer County Water Agency and the Friends of the River, Save the American River Association, and the Sierra Club, Mother Lode Chapter (on September 16, 1999); as well as Mr. William Berry (on November 20, 1999).

Inclusion in this permit of provisions of the referenced agreements shall not be construed as affecting the enforceability, as between the parties, of such provisions insofar as they are not inconsistent with the terms of this permit. (0000024)

Division Chief

Dated:

MAY 2 4 2000

# STATE OF CALIFORNIA THE RESOURCES AGENCY STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

# ORDER

APPLICATIONS 18085 and 18087

PERMITS 13856 and 13858

LICENSE
---------

ORDER ALLOWING NEW POINT OF DIVERSION AND REDIVERSION, AND ADDITION OF PERMIT TERMS

# WHEREAS:

- 1. A petition to add a point of diversion and rediversion (located at Folsom Dam) has been filed with the State Water Resources Control Board and said Board has determined that good cause for such changes has been shown.
- 2. The Board has determined that this addition of point of diversion and rediversion will not operate to the injury of any other user of water involved.

# NOW, THEREFORE, IT IS ORDERED:

1. That permission is hereby granted under said Permits 13856 and 13858, to add a point of diversion and rediversion described as follows:

(FOLSOM DAM) SOUTH 38°18' WEST 2,715 FEET FROM NE CORNER OF SECTION 24, TION, R7E, MDB&M BEING WITHIN SW of NE to OF SAID SECTION 24.

# IT IS FURTHER ORDERED that:

1. The following condition be added to Permits 13856 and 13858:

THE QUANTITY OF WATER DIVERTED UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD IF, AFTER NOTICE OF THE PERMITTEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE NO ACTION BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES. (0000013) 2. Paragraph 8 of both permits be amended to read as follows:

PURSUANT TO CALIFORNIA WATER CODE SECTION 100, ALL RIGHTS AND PRIVILEGES UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO, INCLUDING METHOD OF DIVERSION, METHOD OF USE, AND QUANTITY OF WATER DIVERTED, ARE SUBJECT TO THE CONTINUING AUTHORITY OF THE STATE WATER RESOURCES CONTROL BOARD IN ACCORDANCE WITH LAW AND IN THE INTEREST OF THE PUBLIC WELFARE TO PREVENT WASTE, UNREASONABLE USE, UNREASONABLE METHOD OF USE, OR UNREASONABLE METHOD OF DIVERSION OF SAID WATER.

THIS CONTINUING AUTHORITY OF THE BOARD MAY BE EXER-CISED BY IMPOSING SPECIFIC REQUIREMENTS OVER AND ABOVE THOSE CONTAINED IN THIS PERMIT WITH A VIEW TO MINIMIZE WASTE OF WATER AND TO MEETING THE REASONABLE WATER RE-QUIREMENTS OF PERMITTEE WITHOUT UNREASONABLE DRAFT ON THE SOURCE. PERMITTEE MAY BE REQUIRED TO IMPLEMENT SUCH PROGRAMS AS (1) REUSING OR RECLAIMING THE WATER ALLOCATED; (2) RESTRICTING DIVERSIONS SO AS TO ELIMINATE AGRICULTURAL TAILWATER OR TO REDUCE RETURN FLOW: (3) SUPPRESSING EVAPORATION LOSSES FROM WATER SURFACES; (4) CONTROLLING PHREATOPHYTIC GROWTH; AND (5) INSTALLING, MAINTAINING, AND OPERATING EFFICIENT WATER MEASURING DEVICES TO ASSURE COMPLIANCE WITH THE QUANTITY LIMITATIONS OF THIS PERMIT AND TO DETERMINE ACCURATELY WATER USE AS AGAINST REASONABLE WATER REQUIREMENTS FOR THE AUTHORIZED PROJECT. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD DETERMINES, AFTER NOTICE TO AFFECTED PARTIES AND OPPORTUNITY FOR HEARING, THAT SUCH SPECIFIC REQUIREMENTS ARE PHYSICALLY AND FINANCIALLY FEASIBLE AND ARE APPROPRIATE TO THE PAR- (0000012) TICULAR SITUATION.

- DIRECT DIVERSION OF WATER UNDER PERMITS 13856 and 13858 FROM A POINT OF DIVERSION AT FOLSOM DAM SHALL BE LIMITED TO THE SUPPLY AVAILABLE TO THE PERMITTEE AT POINT OF (0000005) DIVERSION #7, AUBURN.
- 4. That the following condition be added to Permits 13856 and 13858:

PROOF OF PERMITTEE'S ABILITY TO DELIVER WATER TO THE SAN JUAN SUBURBAN WATER DISTRICT THROUGH AN AGREEMENT TO BE ENTERED INTO WITH THE UNITED STATES BUREAU OF RECLAMATION (USBR) TO WHEEL SAID WATER THROUGH THE USBR FACILITIES AT FOLSOM RESERVOIR AND DAM SHALL BE SUB-MITTED TO THE BOARD BY DECEMBER 31, 1976.

Dated: JUN 25 1975

R. L. Rosenberger, Chief Division of Water Rights For full information concerning the filling out of this form refer to Article 4 of Rules and Regulations Pertaining to Appropriation of Water

# STATE OF CALIFORNIA—STATE WATER RIGHTS BOARD

Application No. 18085 Filed April 7, 1958, at 4:57 M.

(Applicant must not fill in the above blanks)

APPLICATION TO	APPROPRIATE	UNAPPROPRIATED	WATER
			** ** ** *****************************

I,	Placer County \ applicant or applicants	later Agency		
Of			Comment P	Lacer
Address	Mana		County of P	
State of	California	, do here	by make application for a permit to	o appropriate the
following described v	inappropriated waters of the	State of California, SUI	BJECT TO VESTED RIGHTS:	
Sou	rce, Amount, Use	e and Locatio	n of Diversion Worl	<b>KS</b>
1. The source of	the proposed appropriation is	See supple	ment	
	er and Oorado County, trib		ake, etc., if named; if unnamed state nature of source  pplement	
			der this application is as follows:	
	<del></del>			autic for man
(a) For diversi	on to be directly applied to be	2 cubic foot per s	1225 second equals 40 statute miner's inches or 646,317 ga	llons per day
second, to be diverted	d from Novem		July 1	of each year.
(b) For diversi	ion to be stored and later appl	ied to beneficial use	See supplement	acre-feet
per annum, to be col	lected between Novem		d July 1	of each season.
Note.—Answer (a) or day. Neither the amount	Beginning date $(b)$ or both $(a)$ and $(b)$ as may	be necessary. If amount unde	Closing date er (a) is less than .025 cubic foot per second erground storage is proposed a special supple	
	1	s irrigation s	and incidental domestic,	recreations
Municipal and		Domestic, irrigation, power, mun	nicipal, mining, industrial, recreational	
				purposes.
4. The point of c	diversion is to be located	See supplement f	or points of diversion	to storage
and points of Auburn Pumping	rediversion of store Plant 444, 400'N 2	ed water. Point, 267, 400'E, Cal	of direct diversion to ifornia Grid Coordinate	use is at
being within the	그 그 그림에 가는 그를 잃어가고 되었다.		( 4) 12은 전 (1111) ( 2) 4 박 (1) ( 2) 2 ( 2) 	
State	e 40-acre subdivision of public land survey o	= : · · · · · · · · · · · · · · · · · ·		
of Section 23,	T. 12N , R. 8E ,	M. D. B. & M.,	in the County of Placer	
5. The main con-	duit terminates in SE of	NW1 of Sec. 18 subdivision of U. S. Government su	T. 12N, R. 8E, I	M. D. B. & M.
	Description	on of Divers	ion Works	
NOTE.—An app	· · · · · · · · · · · · · · · · · · ·		ess of the estimated capacity of the diver	rsion works.
	adworks (fill only those bla			
(a) Diversion	will be made by pumping fro	m North Fork A	American River	
		Sump, offset well, unobstructed	supplement feet in heigh	nt (stream bed to
level of overflow);	feet long or	n top; and constructed	of	
•			Concrete, earth, brush, etc. ream bed to spillway level);	
long on top; have a f	freeboard of	feet, and be construc	eted of	
7. Storage Reser	voir See supplem	ent	Concrete, earth, etc.	
The storage reserv	oir will flood lands in			
	Indicate se	ection or sections, also 40-acre subd	divisions unless shown upon map	
capacity of 25 acre-	feet or more fill in the follow	ring: Diameter of outle	ofacre-feet. I et pipeinches; length_ pipefeet; fall in pipe	feet;

8. Conduit System (describe main	conduits only)			
(a) Canal, ditch, flume: Width	on top (at water lin	e) See supplement fee	t; width at bott	tom
feet; depth of water	feet; length	feet; grade	feet 1	per 1,000 feet; materials
of construction	, 			
Earth, rock, timber, etc.  (b) Pipe line: Diameter		an ath	foots grade	feet ner
		_		
1,000 feet; total fall from intake to ou		· ·		
Note.—If a combination of different sizes of clearly on map.				
9. The estimated capacity of the	diversion conduit or	pumping plant proposed is	State cubic i	feet per second or gallons per minute
The estimated cost of the diver	sion works proposed	is \$ 107,376,000  Give only cost of inconduits described here	take, or headworks, p	umps, storage reservoirs and main
	Completi	ion Schedule		
10. Construction work will begin	on or before	July 1, 1965		
Construction work will be completed	on or before	July 1, 1975		
The water will be completely applied t	to the proposed use o	on or before July	1, 2007	N - • - 11 •
84 174			* ***	•
<b></b>	Description	of Proposed U	se	
11. Place of Use. Western Pl	Lacer County -	Valley and Foothi	11 units,	State DWR Bul.10
Total Area 250,610 Acres,	enter the second se	and the second of the second o	eyed indicate the loca	tion as the inner of the public faile
		irrigated in each 40-acre tract, if	space permits If spa	ce does not permit listing of all
survey were projected. In the case of irrigation use sta	ite the number of acres, to be	, , , , , , , , , , , , , , , , , , , ,	opano pormitto ar opi	
survey were projected. In the case of irrigation use sta				
survey were projected. In the case of irrigation use sta 40-acre tracts, describe area in a general way and show	detail upon map.			
survey were projected. In the case of irrigation use sta 40-acre tracts, describe area in a general way and show Do(es) applicant(s) own the land w	detail upon map.	will be made?		ntly?Yes or No
40-acre tracts, describe area in a general way and show  Do(es) applicant(s) own the land want joint owners should include their names as applicant upplicant is a public agence.	detail upon map.  whereon use of water  ts and sign application at boo  y and will ma	will be made?		
40-acre tracts, describe area in a general way and show  Do(es) applicant(s) own the land w  All joint owners should include their names as applicant  applicant is a public agence  or delivery of water under	detail upon map.  whereon use of water  ts and sign application at bo  cy and will ma  PCWA act.	will be made? Yes or N from of third page. Ke contract	Join	Yes or No
40-acre tracts, describe area in a general way and show  Do(es) applicant(s) own the land w  All joint owners should include their names as applicant  pplicant is a public agency  or delivery of water under  If applicant does not own land whereon use of water will	whereon use of water ts and sign application at bo y and will mai PCWA act. Il be made, give name and ad	will be made? Yes or Notes of third page. KE CONTRACT dress of owner and state what arrange	Join	Yes or No
40-acre tracts, describe area in a general way and show  Do(es) applicant(s) own the land w  All joint owners should include their names as applicant  applicant is a public agence  or delivery of water under	whereon use of water ts and sign application at bo y and will mai PCWA act. Il be made, give name and ad	will be made? Yes or Notes of third page. KE CONTRACT dress of owner and state what arrange	Join	Yes or No
40-acre tracts, describe area in a general way and show Do(es) applicant(s) own the land w All joint owners should include their names as applicant applicant is a public agence or delivery of water under If applicant does not own land whereon use of water with  12. Other Rights. Describe all right	whereon use of water ts and sign application at bo y and will mai PCWA act. Il be made, give name and ad	will be made? Yes or Notes of third page. KE CONTRACT dress of owner and state what arrange	Join	Yes or No
40-acre tracts, describe area in a general way and show Do(es) applicant(s) own the land wall joint owners should include their names as applicant applicant is a public agence or delivery of water under If applicant does not own land whereon use of water will  12. Other Rights. Describe all right to the above named lands.  Nature of Right	vhereon use of water ts and sign application at boo cy and will mai PCWA act. Il be made, give name and ad ats except those on fi	will be made? Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years	Joir	with him. er which water is served
All joint owners should include their names as applicant (s) own the land we half joint owners should include their names as applicant agency of water under f applicant os an own land whereon use of water with 12. Other Rights. Describe all right to the above named lands.  Nature of Right (riparian, apprepriative, purchased water, etc.)	vhereon use of water ts and sign application at boo cy and will mai PCWA act. Il be made, give name and ad ats except those on fi	will be made? Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years	ments have been made ghts Board und	with him. er which water is served
All joint owners should include their names as applicant (s) own the land we half joint owners should include their names as applicant agency of delivery of water under or delivery of water under 12. Other Rights. Describe all right to the above named lands.  Nature of Right (riparisa, appropriative, purchased water, etc.)	detail upon map.  whereon use of water  ts and sign application at boo  cy and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use	will be made? Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years	ments have been made ghts Board und	with him. er which water is served
40-acre tracts, describe area in a general way and show Do(es) applicant(s) own the land we all joint owners should include their names as applicant agency or delivery of water under If applicant does not own land whereon use of water with 12. Other Rights. Describe all right to the above named lands.  Nature of Right (riparian, appropriative, purchased water, etc.)  1.	detail upon map.  whereon use of water  ts and sign application at boo  cy and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use	will be made?  Yes or Note to the Contract  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known	ments have been made ghts Board und	with him. er which water is served
survey were projected. In the case of irrigation use stated of the case of a general way and show the case of applicant (s) own the land we all joint owners should include their names as applicant policant is a public agency of water under of applicant does not own land whereon use of water with the applicant of the case of t	detail upon map.  whereon use of water  ts and sign application at boo  cy and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use	will be made? Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years	ments have been made ghts Board und	with him. er which water is served
Attach supplement at top of page 3	detail upon map.  whereon use of water  its and sign application at boy  and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use  if necessary.	will be made?  Yes or Notes of third page.  Ke contract  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known	Join ments have been made ghts Board und Season of Use	Yes or No with him. er which water is served Source of Other Supply
survey were projected. In the case of irrigation use stated of the case of a general way and show the case of applicant (s) own the land we all joint owners should include their names as applicant policant is a public agency of water under of applicant does not own land whereon use of water with the applicant of the case of t	detail upon map.  whereon use of water  its and sign application at boy  and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use  if necessary.	will be made?  Yes or Note to the Contract  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known	Join ments have been made ghts Board und Season of Use	with him. er which water is served
Attach supplement at top of page 3	whereon use of water ts and sign application at both y and will ma PCWA act. Il be made, give name and ad tts except those on fi	will be made?  Yes or Notes of third page.  Ke contract  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known  See supplement State net acreage	Join ments have been made ghts Board und Season of Use	Yes or No with him. er which water is served  Source of Other Supply  acres.
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Attach supplement at top of page 3  15. Irrigation Use. The area to be or chard	detail upon map.  whereon use of water  ts and sign application at boy  and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use  if necessary.  irrigated is  ps is as follows: R  general crops.	will be made?  Yes or Note that page. The CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known  See supplement  State net acreage ice	Joir ments have been made ghts Board und Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.
Attach supplement at top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to cro	detail upon map.  whereon use of water  ts and sign application at boy  and will ma  PCWA act.  Il be made, give name and ad  ats except those on fi  Year of First Use  if necessary.  irrigated is  ps is as follows: R  general crops.	will be made?  Yes or Note that page. The CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known  See supplement  State net acreage ice	Joir ments have been made ghts Board und Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.
Attach supplement at top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to croorchard  Attach supplement 2t top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to croorchard  Note: Care should be taken that the vario	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad thats except those on fi  Year of First Use  if necessary. irrigated is the property of the property o	will be made?  Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Richard amount if known including amount if known  See supplement  State net acreage ice	Join ments have been made ghts Board und Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Note: — Care should be taken that the variothe map.  The irrigation season will begin about.	whereon use of water ts and sign application at boy and will ma PCWA act. Il be made, give name and ad ats except those on fi Year of First Use  if necessary. irrigated is ps is as follows: R general crops us statements as to acres Beginning date	will be made?  Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Rischard amount if known  See supplement  State net acreage ice	ments have been made ghts Board und  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres;  acres.  nt in Paragraph 11, and with
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation season will begin about.  14. Power Use. The total fall to be a series as should include their names as applicant agence or delivery of water under agence or delivery of water under applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not own land whereon use of water will applicant does not only applicant about to the map.  The irrigation season will begin about 14. Power Use. The total fall to be	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops pus statements as to acres Beginning date e utilized is Difference	will be made?  Yes or Notes of owner and state what arrange dress of owner and state what arrange le with the State Water Riverse including amount if known  See supplement  State net acreage ice  acres; proge are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other and end above between nozzle or draft tube water levels are consistent with each other are consistent with each	ments have been made ghts Board und Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Attach supplement at top of page 3  13. Irrigation Use. The area to be The irrigation season will begin about 14. Power Use. The total fall to be The maximum amount of water to be	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops sus statements as to acres Beginning date e utilized is Difference used through the pe	will be made?  Yes or Notes of third page. Ke CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known  State net acreage ice acres; proge are consistent with each other and end above between nozzle or draft tube water less notock is	ments have been made ghts Board und  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.
Attach supplement at top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to cro  Corchard acres;  Note.—Care should be taken that the variothe map.  The irrigation season will begin about.  14. Power Use. The total fall to be The maximum amount of water to be The maximum amount of water to be The maximum amount of water to be The maximum theoretical horsepower of the maximum theor	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops sus statements as to acres  Beginning date e utilized is Difference used through the pe	will be made?  Yes or Notes of owner and state what arrange dress of owner and state what arrange le with the State Water Riverse including amount if known  See supplement  State net acresse ice  acres; proge are consistent with each other and end above between nozzle or draft tube water lenstock is  erated by the works is  Secon	ments have been made ights Board und Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.  horsepower.
Attach supplement at top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to croorchard  Attach supplement at top of page 3  13. Irrigation Use. The area to be  The irrigation season will begin about.  14. Power Use. The total fall to be  The maximum amount of water to be app	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops pus statements as to acres Beginning date e utilized is Difference used through the percapable of being general capable of being general capable is For distribution and	will be made?  Yes or Notes of owner and state what arrange dress of owner and state what arrange le with the State Water Rise made in recent years including amount if known  See supplement  State net acreage ice  acres; proge are consistent with each other and end above between nozzle or draft tube water lenstock is  erated by the works is  erated by the works is  Second	ments have been made ights Board und Season of Use  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.  horsepower.
Attach supplement at top of page 3  13. Irrigation Use. The area to be  The segregation of acreage as to cro  Corchard acres;  Note.—Care should be taken that the variothe map.  The irrigation season will begin about.  14. Power Use. The total fall to be The maximum amount of water to be The maximum amount of water to be The maximum amount of water to be The maximum theoretical horsepower of the maximum theor	whereon use of water ts and sign application at boy and will ma PCWA act.  Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops pus statements as to acres Beginning date e utilized is Difference used through the percapable of being general capable of being general capable is For distribution and	will be made?  Yes or Notes of owner and state what arrange dress of owner and state what arrange le with the State Water Rise made in recent years including amount if known  See supplement  State net acreage ice  acres; proge are consistent with each other and end above between nozzle or draft tube water lenstock is  erated by the works is  erated by the works is  Second	ments have been made ights Board und Season of Use  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.  horsepower.
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard  Note.—Care should be taken that the variothe map.  The irrigation season will begin about.  14. Power Use. The total fall to be The maximum amount of water to be applicant with the power is to be applicant to the applicant of the works by means of water to be The maximum theoretical horsepower of the nature of the works by means of water to be The segregation of acreage as to croorchard.  15. Power Use. The total fall to be The maximum amount of water to be The maximum theoretical horsepower of the maximum theoretical horsepower of the use to which the power is to be applicant of the size of the nozzle to be used is	whereon use of water ts and sign application at book y and will man PCWA act. Il be made, give name and ad ats except those on fi  Year of First Use  if necessary. irrigated is ps is as follows: R general crops sus statements as to acres Beginning date e utilized is Different used through the pe capable of being general which power is to be of	will be made?  Yes or Notes of owner and state what arrange dress of owner and state what arrange le with the State Water Rise made in recent years including amount if known  See supplement  State net acreage ice  acres; proge are consistent with each other and end above between nozzle or draft tube water lenstock is  erated by the works is  erated by the works is  Second	ments have been made ights Board und Season of Use  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.  horsepower.
Attach supplement at top of page 3  13. Irrigation Use. The area to be The segregation of acreage as to croorchard acres; Note.—Care should be taken that the variothe map.  The irrigation season will begin about.  14. Power Use. The total fall to be The maximum amount of water to be applicate to the works by means of will be applicated to the about.  15. The maximum amount of water to be The maximum theoretical horsepower of the size of the mozzle to be used is.  16. The water will be returned to the works by means of water will be returned to the map.  17. The irrigation the maximum theoretical horsepower of the maximum theoretical horsepower of the size of the nozzle to be used is.  18. The water will be returned to the maximum theoretical be returned to the works by means of water will be returned to the returned to the will be returned	whereon use of water to and sign application at boy and will ma PCWA act.  It be made, give name and ad that except those on fi  Year of First Use  If necessary. It irrigated is The period of the second of the se	will be made?  Yes or Note of third page. See CONTRACT  dress of owner and state what arrange le with the State Water Ri  Use made in recent years including amount if known  State net acreage ice	ments have been made ights Board und Season of Use  Season of Use  to be irrigated cres; alfalfa	Yes or No  with him. er which water is served  Source of Other Supply  acres.  acres.  acres.  nt in Paragraph 11, and with  feet.  surface above  cubic feet per second.  horsepower.

- 1. The amount of water appropriated shall be limited to the amount that can be beneficially used and shall not exceed (a) 1,225 cfs by direct diversion from about November 1 of each year to about July 1 of the succeeding year from North Fork American River, (b) 25,000 af by off-stream storage, at a maximum rate of diversion of 400 cfs, from about November 1 of each year to about July 1 of the succeeding year from Duncan Creek to French Meadows Reservoir, (c) 95,000 af by storage from about November 1 of each year to about July 1 of the succeeding year from Middle Fork American River at French Meadows Reservoir, (d) 129,000 af by storage from about November 1 of each year to about July 1 of the succeeding year from Rubicon River at Hell Hole Reservoir.
- 2. The maximum amount of water to be diverted to storage under this permit and permits issued pursuant to Applications 18084, 18086 and 18087 during any one season shall not exceed (a) 133,700 acre-feet at French Meadows Reservoir and (b) 208,400 acre-feet at Hell Hole Reservoir.
- 3. The maximum amount herein stated may be reduced in the license if investigation warrants. (0000006)
- 4. Actual construction work shall begin on or before September 1, 1963, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.
  - 5. Construction work shall be completed on or before December 1, 1967. (0000008)
- 6. Complete application of the water to the proposed use shall be made on or before December 1, 2007.
- 7. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued. (000000)
- 8. All rights and privileges under this permit including method of diversion, method of use, and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of diversion of said water.
- 9. This permit is subject to the prior rights of any county in which the water sought to be appropriated originates to the use of such water as may be necessary for the development of such county as provided for in Section 10505 of the Water Code (0000999)
- 10. To the extent that their provisions relate to matters within the jurisdiction of the State Water Rights Board, this permit is subject to stipulations and agreements between the permittee and the California Department of Fish and Game, dated July 20, 1962, San Juan Suburban Water District, et al., dated May 21, 1962, Sacramento Municipal Utility District, dated May 21, 1962, and the City of Sacramento, dated May 21, 1962, which were filed for record at the hearing on Applications 18084, 18085, 18086, and 18087 as Placer County Water Agency's Exhibits 19, 20, 21, and 22, respectively.
- 11. This permit does not authorize collection of water to storage during the period outside of the collection seasons specified in Paragraph 1, to offset evaporation or seepage losses or for any other purpose.
- 12. Permittee shall allow representatives of the State Water Rights Board and other parties as may be authorized from time to time by said Board reasonable access to project works to determine compliance with the terms of this permit.

FORM 61-A

# **IMPORTANT**

# [Please Read Carefully]

- 1. Note the terms and conditions of this permit. Construction work must be prosecuted, and the water applied to the beneficial uses intended with due diligence. Annual reports of progress will be expected from you upon forms which will be furnished for the purpose. When the water has been fully applied to the beneficial uses intended the Water Code requires that you notify the State Water Rights Board thereof.
- 2. Neither this application nor the permit is a water right, but if the terms and conditions of the permit are observed a water right can be obtained through beneficial use of the water—the extent of the right to be determined by a field inspection which will be made by a representative of the State Water Rights Board.
- 3. No change in point of diversion, or place of use or character of use, can be made under this application and permit without the approval of the State Water Rights Board.
- 4. If the rights under this permit are assigned immediate notice to that effect with the name and address of the new owner should be forwarded to the State Water Rights Board, Sacramento, California.
- 5. Please advise immediately of any change of address. Until otherwise advised communications will be sent to the address Page 280 of 534

# APPLICANT MUST NOT FILL IN BLANKS BELOW

# PERMIT No. 13856

This is to certify that the application of which the foregoing is a true and correct copy has been considered and approved by the State Water Rights Board SUBJECT TO VESTED RIGHTS and the following limitations and conditions:

- 13. In accordance with requirements of Water Code Section 1393, permittee shall clear the site of each of the proposed reservoirs of all structures, trees, and other vegetation which would interfere with the use of the reservoir for water storage and (0120050) recreational purposes.
- 14. This permit is subject to compliance by permittee with Section 10504.5(a) of (0330999) the Water Code.
- 15. Separate applications for the approval of plans and specifications for construction of the dams described in this approved water right application shall be filed with and approved by the Department of Water Resources prior to commencement of construction (0360048) of the dams.

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

section 1322. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code). the Water Code).

Dated: JAN 10 1963

STATE WATER RIGHTS BOARD

L. K. Will L. K. Hill

Executive Officer

75384 10-62 500 ① SPO Page 281 of 534

# NOT WRITE IN THIS SPACE ATTACH EXTRA SHEETS HERE

The estimated average daily consumption during the month of maximum use at the end of each five-year period un mount applied for is put to beneficial use is as follows:  Acre-feet per day  1970 - 133	ntil the full
mount applied for is put to beneficial use is as follows:  Acre-feet per day  1970 - 133	
1970 - 133 1985 - 240 2000 - 420  1975 - 167 1990 - 294 2005 - 487  1980 - 200 1995 - 354 2010 - 560 2015 - 667  16. Mining Use. The name of the mining property to be served is None Name of claim  and the nature of the mines is Gold placer, quartz, etc.	
1975 - 167  1990 - 294  2005 - 487  1980 - 200  1995 - 354  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is None Name of claim  and the nature of the mines is  Gold placer, quartz, etc.	
1986 - 200  1995 - 354  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is None Name of claim  and the nature of the mines is Gold placer, quartz, etc.	
16. Mining Use. The name of the mining property to be served is None  Name of claim  and the nature of the mines is  Gold placer, quartz, etc.	Java
and the nature of the mines is Gold placer, quartz, etc.	
Gold places, quarter, over	
Goid places, quarte, over	
HE METHOD OF GUILDING CHO WAVE ASSISTED	2
to the project will be	
t is estimated that the ultimate water requirement for this project will be	etimate
The water will not be polluted by chemicals or otherwise.  Explain nature of pollution, if any	
nd it will not Explain nature of pollution, it any  in	01
Sec, T, R, B. & M.	
17. Other Uses. The nature of the use proposed is recreational and industrial  Industrial, recreational, domestic, stockwatering, fish culture, etc.	
predictions can be made.	
predictions can be made.	
oredictions can be made.	
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes or No	. If not
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  State specifically the time required for filing same.	. If not
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion?  No. 15 Yes, or No. 15 Yes, or No. 15 Yes, or No. 16 not, give	If not
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion? No.  Yes, or No.  Yes, or No.  19. Does the applicant own the land at the proposed point of diversion? No.  Yes, or No.	If not
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  State specifically the time required for filing same.	If not the same and the same an
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion?  No. 16 not, give address of owner and state what steps have been taken to secure right of access thereto.	. If not the analysis of the a
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion?  No. Yes or No  Address of owner and state what steps have been taken to secure right of access thereto.	. If not ve name and
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes  Yes  Yes  19. Does the applicant own the land at the proposed point of diversion?  Nor Yes or No  If not, give address of owner and state what steps have been taken to secure right of access thereto.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California	. If not
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion?  No. If not, give address of owner and state what steps have been taken to secure right of access thereto.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed.	ve name and
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes Yes or No  19. Does the applicant own the land at the proposed point of diversion?  NO. If not, give address of owner and state what steps have been taken to secure right of access thereto.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed diversion?  U. S. Bureau of Reclamation	ve name and
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Yes  Yes or No  19. Does the applicant own the land at the proposed point of diversion?  Yes of the applicant own the land at the proposed point of diversion?  Yes or No  Yes or No  Yes or No  Yes or No  Address of owner and state what steps have been taken to secure right of access thereto.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed.	ve name and
General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes Yes or No  19. Does the applicant own the land at the proposed point of diversion?  No. If not, give address of owner and state what steps have been taken to secure right of access thereto.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed diversion?  Us S. Bureau of Reclamation	ve name and

Supplement to Application 18085

# Paragraph 1 - Sources of Appropriation

- (1) Duncan Creek
- (2) Middle Fork American River
- (3) Rubicon River
- (5) Middle Fork American River
- (6) Middle Fork American River
- (7) North Fork American River
- (4a) is tributary to (3)
- (4b) is tributary to (4a)
- (1) and (3) are tributary to (2) or (5)
- (5) and/or (6) are tributary to the North Fork American River thence the American River.

# Supplement to Application 18085

# Paragraph 2 (a) and (b) - Amount of Water

	STREAM	STRUCTURE	Direct Diversion Cubic feet per second	For Diversion to be stored and later applied to beneficial use - Acre-feet per annum	Name of Reservoir where water will be stored
1	Duncan Creek	Duncan Creek Diversion		25,000 <sup>1</sup>	French Meadows
2	M.F. American R.	French Meadows Dam and Reservoir	,	95,000	French Meadows
3	Rubicon River	Hell Hole Dam and Reservoir	L	129,000 <sup>2</sup>	Hell Hole
7	N.F. American R.	Auburn Division	1225		

<sup>1.</sup> Maximum rate of diversion to storage in French Meadows Reservoir-400 cubic feet per second from Duncan Creek.

<sup>2.</sup> Includes 4,000 acre-feet of water formerly in Parsley Bar Reservoir which has been eliminated from Project.

# Supplement to Application 18085

# Paragraph 4 - Points of Diversion

Ref.				ornia ordinates, ne II E	Mount Dia			-B
	Par. 4 - Points of Di	version						
1 2 3 5 6 7	Duncan Creek M.F. American R. Rubicon River M.F. American R. M.F. American R. N.F. American R.	Duncan Creek French Meadows Hell Hole Ralston Interbay Ralston Afterbay Auburn	538,130 530,100 510,750 498,137 490,160 444,400	2,452,000 2,397,300 2,357,100	sw see nw ne nw nw	24 36 16 35 3 23	15 15 14 14 13 12	13 14 12 11 8
	Par. 4 - Points of Re	diversion						
2 3 5 6 7	M.F. American R. Rubicon River M.F. American R. M.F. American R. N.F. American R.	French Meadows Hell Hole Ralston Interbay Ralston Afterbay Auburn	530,100 510,750 498,137 490,160 444,400	2,397,300	SW SE NW NE NW NW	36 16 35 3 23	15 14 14 13 12	13 14 12 11 8

LOCATION

Supplement to Application 18085

Paragraph 6 - Intake or Headworks

Ref.		Your of Dam	Di	<b>imensions</b>	(feet)	Material
No.	Stream	Name of Dam	Height	Length	Freeboard	
	Par - 6(b) - Diver	sion Dams				
1.	Duncan Creek	Duncan Cr. Diversion	<del>3</del> 2	188	10	Concrete
5•	M.F. American R.	Ralston Interbay	75	212	10	Concrete
6.	M. F. American R.	Ralston Afterbay	90	500	5	Gravel Fill
7•	N. F. American R.	Auburn Diversion	25	400	None	Concrete
	Par - 6(c) - Storag	e Dams				
2. 3.	M. F. American R. Rubicon River	French Meadows* Hell Hole	228 410	2700 1570	5 20	Composite Rockfill
* Also	serves as Diverting	Dam				ŝ

Supplement to Application 18085

Paragraph 7 - Storage Reservoirs

Ref.	Stream	Reservoir	Flood Lands In	Surface Area Acres	Capacity Acre-feet
	M.F. American River	French Meadows	See Map	1418	133,700
	Rubicon River	Hell Hole	See Map	1245	208,400

Supplement to Application 18085

Paragraphs 8 (a) and 9 - Conduit System and Capacities

FROM	10	Distance Miles	<b>Section</b>	Size (feet)	Туре	Slope (Invert Gradient)	Capacity
Duncan Creek Diversion	French Meadows Res. M.F. American River	1.49	Tunnel Horseshoe (unlined)	9 <b>x</b> 10	Flowline	8100.0	φοφ
French Meadows Res. M.F. American River	French Meadows P.P. Rubicon River	2.78	Tunnel Horseshoe (unlined)	12.5X12.5	Pressure	0.0040	004
Hell Hole Rubicon River	Long Canyon Diversion S.F. Long Canyon	<b>3.2</b> 9	Tunnel Horseshoe (unlined)	13.25X 13.25 Pressure	5 Pressure	0.0045	830
Ralston Interbay M. F. American River	Ralston Powerplant Rubicon River	5.14 1.56	Tunnel Horseshoe	13.25X 13.	13.25X 13.25 Pressure 10.58X 11.42 Pressure	0.0060	830 830
Ralston Afterbay M.F. American River	Oxbow Regulator M.F. American R.	0.25	<pre>funne1 Horseshoe</pre>	16.0 x 16.0	16.0 X 16.0 Pressure		1930
Auburn Diversion 'N.F. American River	Auburn Ravine	3.14	Tunnel Horseshoe	8 <b>x</b> 8	Pressure	0.0006	*004

<sup>\*</sup> First Increment of diversion works for Western Placer County

Supplement to Application 18085 Faragraph 13 - Irrigation Use

Description and Crop		Areas in Acres	
	Valley	Foothill	Total
Total Area	109,470	141,140	250,610
Irrigable Area	94,000	65,600	159,600
Probable Ultimate Pattern of land use -			
Pasture & Hay	42,000	32,600	74,600
R <b>ic</b> e	28,000		28,000
Crchard & Vineyard	5,000	23,000	28,000
General Crops incl. Truck	5,000	10,000	15,000)
Somgh <b>ums</b>	9,000		9,000 29,000
Corn	5,000		5,000)
			•

1213858

#### STATE OF CALIFORNIA CAIFORNIA ENVIRONMENTAL PROTECTION AGENCY STATE WATER RESOURCES CONTROL BOARD

#### **DIVISION OF WATER RIGHTS**

#### **ORDER**

Application 18087 Permit 13858

## ORDER APPROVING CHANGE IN THE PLACE OF USE, AND AMENDING THE PERMIT

#### WHEREAS:

- 1. Permit 13858 was issued to Placer County Water Agency on January 10, 1963, pursuant to Application 18087.
- 2. A petition to change the place of use of Permit 13858 was filed with the State Water Resources Control Board (SWRCB) on July 31,1996 and the SWRCB has determined that good cause for such change has been shown. Public notice of the change was issued on October 18, 1996 and protest issues have been resolved. Resultant protest resolution agreements have been incorporated into this order.
- 3. The SWRCB has determined that the petition to change the place of use does not constitute the initiation of a new right nor operate to the injury of any other lawful user of water.
- 4. Fish, wildlife, and plant species have been or may be listed under the federal Endangered Species Act and/or the California Endangered Species Act. A paragraph should be placed in the permit making the permittee aware of possible obligations resulting from these acts.
- 5. The paragraph relating to the continuing authority of the SWRCB should be updated to conform to section 780(a), title 23 of the California Code of Regulations.

#### NOW, THEREFORE, IT IS ORDERED THAT:

1. The place of use under Permit 13858 shall be amended as follows:

The place of use is situated in portions of Placer and Sacramento counties as shown on the Placer County Water Agency map set dated July 31, 1996, on file with the SWRCB.

2. Paragraph 8, the continuing authority condition, shall be updated to read as follows:

Pursuant to California Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this permit, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the SWRCB in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the SWRCB may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirement for the authorized project. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the SWRCB also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution article X, section 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust. (0000012)

3. An Endangered Species term shall be added to Permit 13858 to read as follows:

This permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

(0000014)

3. The following term shall be added to Permit 13858 to read as follows:

Permittee shall comply with provisions of the following settlement agreements on file with the SWRCB:

- (a) Agreement for Dismissal of Protest by California Department of Water Resources to Placer County Water Agency's Petition before State Water Resources Control SWRCB for Change in Place of Use under Permits Nos. 13856 (App. No. 18085) and 13858 (App. No. 18087) executed on September 30, 1999;
- (b) Stipulated Agreement for Dismissal of Bureau of Reclamation's Protest to Placer County Water Agency's Petition to Expand the Place of Use Under Application 18085 (Permit 13856) and Application 18087 (Permit 13858) executed on September 8, 1998;
- (c) SETTLEMENT AGREEMENT CONCERNING PLACER COUNTY WATER AGENCY'S PETITION TO EXPAND ITS PLACE OF USE UNDER WATER RIGHT PERMITS 13856 AND 13858 executed between Placer County Water Agency and the County of Sacramento (on March 23, 1999); as well as the City of Sacramento (on April 13, 1999); and
- (d) Stipulated Agreement for Dismissal of Protest to Placer County Water Agency's Petition to Expand the Place of Use Under Application 18085 (Permit 13856) and Application 18087 (Permit 13858) executed between the Placer County Water Agency and the Friends of the River, Save the American River Association, and the Sierra Club, Mother Lode Chapter (on September 16, 1999); as well as Mr. William Berry (on November 20, 1999).

Inclusion in this permit of provisions of the referenced agreements shall not be construed as affecting the enforceability, as between the parties, of such provisions insofar as they are not inconsistent with the terms of this permit. (0000024)

Division Chief

Dated:

MAY 2 4 2000

# STATE OF CALIFORNIA THE RESOURCES AGENCY STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

#### **ORDER**

APPLICATIONS 18085 and 18087

PERMITS 13856 and 13858

ŧ	IC	EN	Je	c
		E 1	73	×

ORDER ALLOWING NEW POINT OF DIVERSION AND REDIVERSION, AND ADDITION OF PERMIT TERMS

#### WHEREAS:

- 1. A petition to add a point of diversion and rediversion (located at Folsom Dam) has been filed with the State Water Resources Control Board and said Board has determined that good cause for such changes has been shown.
- 2. The Board has determined that this addition of point of diversion and rediversion will not operate to the injury of any other user of water involved.

#### NOW, THEREFORE, IT IS ORDERED:

1. That permission is hereby granted under said Permits 13856 and 13858, to add a point of diversion and rediversion described as follows:

(FOLSOM DAM) SOUTH 38 18' WEST 2,715 FEET FROM NE CORNER OF SECTION 24, TION, R7E, MDB&M BEING WITHIN SW OF NE OF SAID SECTION 24.

#### IT IS FURTHER ORDERED that:

1. The following condition be added to Permits 13856 and 13858:

THE QUANTITY OF WATER DIVERTED UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD IF, AFTER NOTICE OF THE PERMITTEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES.

WRCB 133 (12-67) 2. Paragraph 8 of both permits be amended to read as follows:

PURSUANT TO CALIFORNIA WATER CODE SECTION 100, ALL RIGHTS AND PRIVILEGES UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO, INCLUDING METHOD OF DIVERSION, METHOD OF USE, AND QUANTITY OF WATER DIVERTED, ARE SUBJECT TO THE CONTINUING AUTHORITY OF THE STATE WATER RESOURCES CONTROL BOARD IN ACCORDANCE WITH LAW AND IN THE INTEREST OF THE PUBLIC WELFARE TO PREVENT WASTE, UNREASONABLE USE, UNREASONABLE METHOD OF USE, OR UNREASONABLE METHOD OF DIVERSION OF SAID WATER.

THIS CONTINUING AUTHORITY OF THE BOARD MAY BE EXER-CISED BY IMPOSING SPECIFIC REQUIREMENTS OVER AND ABOVE THOSE CONTAINED IN THIS PERMIT WITH A VIEW TO MINIMIZE WASTE OF WATER AND TO MEETING THE REASONABLE WATER RE-QUIREMENTS OF PERMITTEE WITHOUT UNREASONABLE DRAFT ON THE SOURCE. PERMITTEE MAY BE REQUIRED TO IMPLEMENT SUCH PROGRAMS AS (1) REUSING OR RECLATMING THE WATER ALLOCATED; (2) RESTRICTING DIVERSIONS SO AS TO ELIMINATE AGRICULTURAL TAILWATER OR TO REDUCE RETURN FLOW: (3) SUPPRESSING EVAPORATION LOSSES FROM WATER SURFACES;
(4) CONTROLLING PHREATOPHYTIC GROWTH; AND (5) INSTALLING,
MAINTAINING, AND OPERATING EFFICIENT WATER MEASURING
DEVICES TO ASSURE COMPLIANCE WITH THE QUANTITY LIMITA-TIONS OF THIS PERMIT AND TO DETERMINE ACCURATELY WATER USE AS AGAINST REASONABLE WATER REQUIREMENTS FOR THE AUTHORIZED PROJECT. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD DETERMINES, AFTER NOTICE TO AFFECTED PARTIES AND OPPORTUNITY FOR HEARING, THAT SUCH SPECIFIC REQUIREMENTS ARE PHYSICALLY AND FINANCIALLY FEASIBLE AND ARE APPROPRIATE TO THE PAR-TICULAR SITUATION.

(0000012)

3. That the following condition be added to Permits 13856 and 13858:

DIRECT DIVERSION OF WATER UNDER PERMITS 13856 and 13858 FROM A POINT OF DIVERSION AT FOLSOM DAM SHALL BE LIMITED TO THE SUPPLY AVAILABLE TO THE PERMITTEE AT POINT OF DIVERSION #7, AUBURN.

4. That the following condition be added to Permits 13856 and 13858:

PROOF OF PERMITTEE'S ABILITY TO DELIVER WATER TO THE SAN JUAN SUBURBAN WATER DISTRICT THROUGH AN AGREEMENT TO BE ENTERED INTO WITH THE UNITED STATES BUREAU OF RECLAMATION (USBR) TO WHEEL SAID WATER THROUGH THE USBR FACILITIES AT FOLSOM RESERVOIR AND DAM SHALL BE SUBMITTED TO THE BOARD BY DECEMBER 31, 1976.

(0000999)

Dated: JUN 25 1975

R. L. Rosenberger Chief Division of Water Rights

## STATE OF CALIFORNIA-STATE WATER RIGHTS BOARD

Application No. 18087 Filed April 8, 1958 at 10:51 A.M.

(Applicant must not fill in the above blanks)

## APPLICATION TO APPROPRIATE UNAPPROPRIATED WATER

I, Placer County Water Agency Name of applicant or applicants		
of Auburn	County of	Placer
State of California	do hereby make application for a per	mit to annuanias sh
ollowing described unappropriated waters of the State of Cal		
	r ·	
Source, Amount, Use and I	ocation of Diversion W	orks
1. The source of the proposed appropriation is See		
Placer and Gives ocated in El Dorado County, tributary to	name of stream, lake, etc., if named; if unnamed state nature	
2. The amount of water which applicant desires to appr	ropriate under this application is as follo	ws:
(a) For diversion to be directly applied to beneficial use	800 1 cubic foot per second equals 40 statute miner's inches or 646	cubic feet per
econd, to be diverted from November 1.  Beginning date		
(b) For diversion to be stored and later applied to benefi	cial use See supplement  1 acre-foot equals 327,871 gallons	acre-feet
er annum, to be collected between November 1  Beginning date	and July 1	of each season.
Note.—Answer (a) or (b) or both (a) and (b) as may be necessary 16	Closing date	
y. Neither the amount nor the season may be increased after application is pplied by the State Water Rights Board upon request.	s filed. If underground storage is proposed a special	supplemental form will be
3. The use to which the water is to be applied is irriga	ation and incidental domestic	c, recreational
minicipal and industrial	ion, power, municipal, mining, industrial, recreational	
		purposes.
State bearing and points of rediversion of stored water. P	ement for points of diversion distance or coordinate distances from section or quarter section of direct diversion to ifornia Grid Coordinates	on corner USe is at Aubu
points of rediversion of stored water. P Pumping Plant 444,400 N 2,267,400 E Cal sing within the NW1 of NW1  State 40-acre subdivision of public land survey or projection thereo	distance or coordinate distances from section or quarter section of direct diversion to .ifornia Grid Coordinates	on corner USe is at Aubu
points of rediversion of stored water. P Pumping Plant 444,400'N 2,267,400'E Cal ing within the NW1 of NW1  State 40-acre subdivision of public land survey or projection thereo	distance or coordinate distances from section or quarter section of direct diversion to .ifornia Grid Coordinates	use is at Aubu
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Calling within the NW1 of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of S	distance or coordinate distances from section or quarter section of direct diversion to ifornia Grid Coordinates  of  B. & M., in the County of Place	use is at Aubu
State bearing and points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Calling within the NW4 of NW4 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE of NW4 of State 40-acre subdivision of U.S.	distance or coordinate distances from section or quarter section of direct diversion to ifornia Grid Coordinates  of  B. & M., in the County of Place  ec. 18 , T. 12N , R. 8E ,  Government survey or projection thereof	use is at Aubu
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Caling within the NW4 of NW4 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE4 of NW4 of State 40-acre subdivision of U.S.  Description of I	distance or coordinate distances from section or quarter section of direct diversion to ifornia Grid Coordinates  of  B. & M., in the County of Place  icc. 18 , T. 12N , R. 8E , Government survey or projection thereof  Diversion Works	use is at Aubu
points of rediversion of stored water. P Pumping Plant 444, 400 N 2, 267, 400 E Cal sing within the NW1 of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of S State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grounds.	distance or coordinate distances from section or quarter section.  Coint of direct diversion to ifornia Grid Coordinates.  B. & M., in the County of Place.  B. & M., in the County of Place.  Covernment survey or projection thereof.  Diversion Works.  Diversion Works.	use is at Aubu
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Calling within the NW1 Of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows.  6. Intake or Headworks (fill only those blanks which a	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  of  B. & M., in the County of Place  iec. 18, T. 12N, R. 8E  Government survey or projection thereof  Diversion Works  ossly in excess of the estimated capacity of the opply)	weer is at Aubureer  M.D. B. & M.
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Caling within the NW1 Of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows.  6. Intake or Headworks (fill only those blanks which a sum, offset well.)	distance or coordinate distances from section or quarter section.  Coint of direct diversion to ifornia Grid Coordinates.  B. & M., in the County of Place.  B. & M., in the County of Place.  Covernment survey or projection thereof.  Diversion Works.  Cossily in excess of the estimated capacity of the comply.  The Fork, American River.  I, unobstructed channel, etc.	wse is at Aubureer  M.D. B. & M.
Points of rediversion of stored water. P Pumping Plant 444,400'N 2,267,400'E Cal ing within the NW1 Of NW1  State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of S  State 40-acre subdivision of U. S.  Description of I  NOTE.—An application cannot be approved for an amount gro  6. Intake or Headworks (fill only those blanks which a  (a) Diversion will be made by pumping from Nor  Sump, offset well	distance or coordinate distances from section or quarter section.  Coint of direct diversion to ifornia Grid Coordinates.  B. & M., in the County of Place.  B. & M., in the County of Place.  Covernment survey or projection thereof.  Diversion Works.  Cossily in excess of the estimated capacity of the comply.  The Fork, American River.  I, unobstructed channel, etc.	wse is at Aubureer  M.D. B. & M.
points of rediversion of stored water. Pumping Plant 444, 400 N 2, 267, 400 E Calling within the NW1 Of NW1  State 40-acre subdivision of public land survey or projection thereo  Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 Of NW1 of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows.  6. Intake or Headworks (fill only those blanks which a land of the sump, offset well (b) Diversion will be by gravity, the diverting dam being (b) Diversion will be by gravity, the diverting dam being	distance or coordinate distances from section or quarter section.  Coint of direct diversion to ifornia Grid Coordinates.  B. & M., in the County of Place.  B. & M., in the County of Place.  Covernment survey or projection thereof.  Diversion Works.  Cossly in excess of the estimated capacity of the couply.  The Fork, American River.  I, unobstructed channel, etc.  See supplement feet in hereof.	on corner use is at Aubu eer M.D. B. & M. diversion works.
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Caling within the NW4 Of NW4 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE4 Of NW4 Of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows of the survey of projection thereo State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows of the survey of the subdivision of U.S.  (a) Diversion will be made by pumping from Nor Sump, offset well (b) Diversion will be by gravity, the diverting dam being the survey of the survey of projection thereof the survey of projection the sur	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  of B. & M., in the County of Place  ec. 18 T. 12N R. 8E Government survey or projection thereof  Diversion Works  ossly in excess of the estimated capacity of the opply)  th Fork, American River  l, unobstructed channel, etc.  See supplement feet in h  instructed of Concrete, earth, brush, etc.	M.D. B. & M.  diversion works.
points of rediversion of stored water. P Pumping Plant 444,400'N 2,267,400'E Cal ing within the NW1 Of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of S State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount gro 6. Intake or Headworks (fill only those blanks which a  (a) Diversion will be made by pumping from Nor Sump, offset well  (b) Diversion will be by gravity, the diverting dam being rel of overflow); feet long on top; and con  (c) The storage dam will be See supplementeet in headworks (fill only those supplementeet in headworks).	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  Government survey or projection thereof  Diversion Works  Diversion	M.D. B. & M.  diversion works.
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Calling within the NW1 Of NW1 OF NW1 State 40-acre subdivision of public land survey or projection thereof Section 23, T. 12N, R. SE, M.D.  5. The main conduit terminates in SE1 of NW1 of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grows of the sum of the su	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  B. & M., in the County of Place  B. & M., in the County of Place  Covernment survey or projection thereof  Diversion Works  Constructed channel, etc.  See supplement feet in houstructed of  Concrete, earth, brush, etc.  Constructed of  Concrete, earth, brush, etc.  Constructed of	M.D. B. & M.  diversion works.
points of rediversion of stored water. Pumping Plant 444,400'N 2,267,400'E Calling within the NW1 of NW1 State 40-acre subdivision of public land survey or projection thereo Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grow of the sum of the	distance or coordinate distances from section or quarter section.  Coint of direct diversion to ifornia Grid Coordinates.  B. & M., in the County of Place.  B. & M., in the County of Place.  Covernment survey or projection thereof.  Diversion Works.  Cossily in excess of the estimated capacity of the couply.  The Fork, American River.  I, unobstructed channel, etc.  See supplement feet in homstructed of Concrete, earth, brush, etc.  Concrete, earth, brush, etc.  Concrete, earth, etc.	on corner use is at Aubu eer  M.D. B. & M. diversion works.
points of rediversion of stored water. F Pumping Plant 444,400'N 2,267,400'E Cal sing within the NW1 of NW1 State 40-acre subdivision of public land survey or projection thereo  Section 23, T. 12N, R. SE, M.D.  The main conduit terminates in SE1 of NW1 of S State 40-acre subdivision of U. S.  Description of I  NOTE.—An application cannot be approved for an amount gro  6. Intake or Headworks (fill only those blanks which a  (a) Diversion will be made by pumping from Nor  Sump, offset well  (b) Diversion will be by gravity, the diverting dam being yel of overflow); feet long on top; and con  (c) The storage dam will be See supplemented in head on top; have a freeboard of feet, and be supplemented.  Storage Reservoir See supplement	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  B. & M., in the County of Place  Covernment survey or projection thereof  Diversion Works  Divers	M.D. B. & M.  diversion works.
points of rediversion of stored water. Pumping Plant 444, 400 N 2, 267, 400 E Calleing within the NWL Of NWL OF NWL State 40-acre subdivision of public land survey or projection thereof Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SEL OF NWL OF State 40-acre subdivision of U.S.  Description of I  NOTE.—An application cannot be approved for an amount grow of the subdivision will be made by pumping from Nor Sump, offset well (b) Diversion will be by gravity, the diverting dam being yel of overflow); feet long on top; and confidence of the storage dam will be see supplemented in the storage Reservoir See supplement  The storage reservoir will flood lands in Indicate section or sections, also in Indicate section or sections.	distance or coordinate distances from section or quarter section of direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  B. & M., in the County of Place  B. & M., in the County of Place  Covernment survey or projection thereof  Diversion Works  Constructed channel, etc.  See Supplement feet in head of Concrete, earth, brush, etc.  Concrete, earth, brush, etc.  Concrete, earth, etc.	wse is at Aubu eer  M.D. B. & M.  diversion works.
points of rediversion of stored water. Pumping Plant 444, 400'N 2, 267, 400'E Calsing within the Note of Note	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  B. & M., in the County of Place  Covernment survey or projection thereof  Diversion Works  Divers	M.D. B. & M.  diversion works.
points of rediversion of stored water. F Pumping Plant 444, 400'N 2, 267, 400'E Cal eing within the NW1 of NW1 State 40-acre subdivision of public land survey or projection thereo  f Section 23, T. 12N, R. 8E, M.D.  5. The main conduit terminates in SE1 of NW1 of S State 40-acre subdivision of U. S.  Description of I  NOTE.—An application cannot be approved for an amount gro  6. Intake or Headworks (fill only those blanks which a  (a) Diversion will be made by pumping from Nor  Sump, offset well  (b) Diversion will be by gravity, the diverting dam being yel of overflow); feet long on top; and converted to the store of the sum of t	distance or coordinate distances from section or quarter section to direct diversion to ifornia Grid Coordinates  B. & M., in the County of Place  B. & M., in the County of Place  B. & M., in the County of Place  Covernment survey or projection thereof  Diversion Works  Cossily in excess of the estimated capacity of the expely)  th Fork, American River  I, unobstructed channel, etc.  See supplement feet in houstructed of  Concrete, earth, brush, etc.  Concrete, earth, brush, etc.  Concrete, earth, etc.	wse is at Aubu eer  M.D. B. & M. diversion works.  eight (stream bed to  feet

Cross out two not used	feet lenoth	feet: grade	feet pe	r 1,000 feet; material
eet; depth of water				
f constructionEarth, rock, timber, etc.				
(b) Pipe line: Diameter				
,000 feet; total fall from intake	to outletfee	t; kind	od-stave, etc.	
Note.—If a combination of different	sizes or kinds of conduit is to be	e used, attach extra sheets with o	complete description	a, also show location of eac
learly on map.  9. The estimated capacity of			See supp	_
		\$ 107.376.000		
The estimated cost of the	diversion works proposed i	Give only cost of inte	ke, or headworks, pu	mps, storage reservoirs and mai
	Completi	on Schedule		
10. Construction work will	begin on or before	July 1, 1965		
Construction work will be comp				
		and the second s		
The water will be completely app	plied to the proposed use o	n or before		
	Description	of Proposed Us	se	
	· <del>-</del>			State TWP
11. Place of Use. Weste	State 40-acre subdivisions of the	public land survey. If area is unsurve	yed indicate the locat	ion as if lines of the public le
Bul. 10 - Total Are	e 250.610 acres.	Trrigable area 159	.600 acres	<u> </u>
urvey were projected. In the case of irrigation	n use state the number of acres to be	s irrigated in each sprace trace, it	space permissi an open	
0-acre tracts, describe area in a general way as	nd show detail upon map.			
Do(es) applicant(s) own the	land whereon use of water	will be made? NO	Tai	. 4 C [4.
Tolin akkenneralah aum ama	MAINT WILLIAMS CO. WHITE	Will be mader	још	Yes or No
-		Yes or No	, Jon	Yes or No
All joint owners should include their names as	applicants and sign application at both	Yes or Notion of third page.  1 make contracts f	or deliver	y of water unde
All joint owners should include their names as  Applicant is a Publif applicant does not own land whereon use of	applicants and sign application at both lic Agency and wil water will be made, give name and ad	Yes or No  Tes or No	or deliver	y of water unde
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a	applicants and sign application at both lic Agency and wil water will be made, give name and ad	Yes or No  Tes or No	or deliver	y of water unde
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a to the above named lands.	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fi	Yes or No.  1 make contracts fidress of owner and state what arrange tile with the State Water Ri	or deliver	y of water unde with him. PCWA Ac er which water is serve
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a	spplicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fine the second state of the second sec	Yes or No  Tes or No	or deliver	y of water unde with him. PCWA Ac er which water is serve
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a to the above named lands.  Nature of Right	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fine the second state of the second sec	Yes or Note that page.  1 make contracts f dress of owner and state what arrange alle with the State Water Rivers and the work water Rivers and the	or deliver	y of water unde with him. PCWA Ac er which water is serv
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second sec	Yes or Notitom of third page.  I make contracts for the contracts of lidress of owner and state what arrange lile with the State Water Riuse made in recent years including amount if known	or deliver	y of water unde with him. PCWA Ac er which water is serv
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water)	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second state of the second seco	Yes or Notitom of third page.  I make contracts for the contracts of lidress of owner and state what arrange lile with the State Water Riuse made in recent years including amount if known	or deliver	y of water unde with him. PCWA Ac er which water is serve
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water  1.	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second state of the second seco	Yes or Notitom of third page.  I make contracts for the contracts of lidress of owner and state what arrange lile with the State Water Riuse made in recent years including amount if known	or deliver	y of water unde with him. PCWA Ac er which water is serve
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fine the second state of the second sec	Yes or Notitom of third page.  I make contracts fidress of owner and state what arrange tile with the State Water Riuse made in recent years including amount if known	or deliver	y of water unde with him. PCWA Ac er which water is serv
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second sign application at both like the second sign application at like the second sign at literation at like the second sign at like the second sign at like	Yes or Notitom of third page.  I make contracts fidress of owner and state what arrange ile with the State Water Ri  Use made in recent years including amount if known	or deliver ments have been made ghts Board und Season of Use	y of water under with him. PCWA Acter which water is served.  Source of Other Supply
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of  13. Irrigation Use. The are	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second state of the second seco	Yes or No.  I make contracts foldress of owner and state what arrange the with the State Water Ribbert	or deliver ments have been made ights Board und Season of Use	y of water under with him. PCWA Acter which water is served.  Source of Other Supply
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine the second state of the second seco	Yes or No.  I make contracts foldress of owner and state what arrange the with the State Water Ribbert	or deliver ments have been made ights Board und Season of Use	y of water under with him. PCWA Acter which water is served.  Source of Other Supply
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of  13. Irrigation Use. The are  The segregation of acreage as	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fine the second sign of the second sign o	Yes or No  I make contracts f Idress of owner and state what arrange ile with the State Water Ri  Use made in recent years including amount if known  See supplement State net screag  Rice a	Cor deliver ments have been made ghts Board und  Season of Use  to be irrigated cres; alfalfa	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.
Applicant is a Publif applicant does not own land whereon use of 12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water 1.  2.  3.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that to the applicant of the segregation of acreage as orchard.	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on fine the second sign of the second sign o	Yes or No  I make contracts f Idress of owner and state what arrange ile with the State Water Ri  Use made in recent years including amount if known  See supplement State net screag  Rice a	Cor deliver ments have been made ghts Board und  Season of Use  to be irrigated cres; alfalfa	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  Attach supplement at top of  13. Irrigation Use. The are  The segregation of acreage as orchard  Note.—Care should be taken that the map.	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on finding the sexcept the sexc	See supplement State net screege acres; peage are consistent with each oth	Season of Use  se to be irrigated cres; alfalfa	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres. ent in Paragraph 11, and we
Applicant is a Publif applicant does not own land whereon use of 12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water 1.  2.  3.  4.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that the map.  The irrigation season will begin	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on fine of the second	See supplement State net screage  acres; page are consistent with each oth	Season of Use  se to be irrigated cres; alfalfa  casture er, with the statem	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acressent in Paragraph 11, and water under with him. PCWA Acter under acressent in Paragraph 11, and water under
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of  13. Irrigation Use. The are  The segregation of acreage as orchard  Note.—Care should be taken that a the map.  The irrigation season will begin  14. Power Use. The total faces.	applicants and sign application at both lic Agency and will water will be made, give name and ad all rights except those on finding the sexcept those of the sexcept those on finding the sexc	See supplement State net acres  See supplement State net acres acres; peage are consistent with each oth  and end a	Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  bout  Closing date	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water in paragraph 11, and wat
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that the map.  The irrigation season will begin  14. Power Use. The total for the maximum amount of water	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on final rights except those on fin rights except those on final rights except those on final right	See supplement State net screege acres; peage are consistent with each oth  and end a  state between nozzle or draft tube water  Yes or No Yes or	Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  Closing date	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water is served.  few surface above cubic feet per second.
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of  13. Irrigation Use. The are  The segregation of acreage as orchard  Note.—Care should be taken that a the map.  The irrigation season will begin  14. Power Use. The total face the maximum amount of water.  The maximum amount of water.	page 3 if necessary.  a to be irrigated is  acres; general crops  the various statements as to acre  about  Beginning date  all to be utilized is  power capable of being general general general crops  at the property of th	See supplement State net screeg  acres; peage are consistent with each oth  and end a  served by the works is  nerated by the works is	Season of Use  Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  bout  Closing date	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water in paragraph 11, and wat
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of  13. Irrigation Use. The are  The segregation of acreage as orchard  Note.—Care should be taken that the map.  The irrigation season will begin 14. Power Use. The total for the maximum amount of water.  The maximum amount of water.  The use to which the power is to t	page 3 if necessary.  a to be irrigated is  acres; general crops  the various statements as to acre  about  Beginning date  all to be utilized is  r to be used through the p  power capable of being general crops  be applied is  For distribution a	See supplement State net acres; peage are consistent with each oth  and end a  make contracts for the state what arrange ille with the State Water Rivers including amount if known  See supplement State net acres; peage are consistent with each oth and end a  and end a  make contracts for the state water state acres; peage are consistent with each oth and end a  make contracts for the state water acres; peage are consistent with each oth and end a  make contracts for the state water acres; peage are consistent with each oth and end a  make contracts for the state water acres including amount if known  Second sale or private use, etc.	Season of Use  Season of Use  se to be irrigated  cres; alfalfa  Closing date  level and first free water  and feet × fall ÷ 8.8	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water is served.  cubic feet per second.
Applicant is a Publif applicant does not own land whereon use of  12. Other Rights. Describe at to the above named lands.  Nature of Right (riparian, appropriative, purchased water)  1.  2.  3.  4.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard  Note.—Care should be taken that the map.  The irrigation season will begin  14. Power Use. The total for the maximum amount of water	page 3 if necessary.  a to be irrigated is  acres; general crops  the various statements as to acre  about  Beginning date  all to be utilized is  r to be used through the p  power capable of being general crops  be applied is  For distribution a	See supplement State net acres; peage are consistent with each oth  and end a  make contracts for the state what arrange ille with the State Water Rivers including amount if known  See supplement State net acres; peage are consistent with each oth and end a  and end a  make contracts for the state water state acres; peage are consistent with each oth and end a  make contracts for the state water acres; peage are consistent with each oth and end a  make contracts for the state water acres; peage are consistent with each oth and end a  make contracts for the state water acres including amount if known  Second sale or private use, etc.	Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  Closing date  level and first free water  and feet × fall ÷ 8.8	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water is served.  cubic feet per second.
Applicant is a Publif applicant does not own land whereon use of 12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water 1.  2.  3.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that the map.  The irrigation season will begin 14. Power Use. The total for the maximum amount of water The maximum amount of water The use to which the power is to The nature of the works by mean The size of the nozzle to be use The size of the nozzle to be use	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on final rights except those on finterest those on final rights except those on final rights except	See supplement State net screage lice are consistent with each oth and end a  and end a  make contracts for the state water response to the state net screage are consistent with each oth and end a  muce between nozzle or draft tube water renstock is second as se	Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  Closing date  level and first free water  and feet × fall ÷ 8.8	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water in Paragraph 11, and wat
Applicant is a Public applicant does not own land whereon use of 12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water 1.  2.  3.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that the map.  The irrigation season will begin 14. Power Use. The total for The maximum amount of water The maximum theoretical horse. The use to which the power is to The nature of the works by mea. The size of the nozzle to be use.	applicants and sign application at both lic Agency and wil water will be made, give name and ad all rights except those on final rights except those on finterest those on final rights except those on final rights except	See supplement State net acres; I eage are consistent with each oth and end a  and end a  see between nozzle or draft tube water benstock is nerated by the works is ced.  developed is Turbine, Pelton when in	Season of Use  Season of Use  se to be irrigated  cres; alfalfa  Closing date  level and first free water  and feet × fall + 8.8	y of water under with him. PCWA Acter which water is served.  Source of Other Supply acres.  acres.  ent in Paragraph 11, and water in surface above cubic feet per second horsepower.
Applicant is a Publif applicant does not own land whereon use of 12. Other Rights. Describe a to the above named lands.  Nature of Right (riparian, appropriative, purchased water 1.  2.  3.  Attach supplement at top of 13. Irrigation Use. The are The segregation of acreage as orchard.  Note.—Care should be taken that the map.  The irrigation season will begin 14. Power Use. The total for the maximum amount of water The maximum amount of water The use to which the power is to The nature of the works by meaning the series of the series o	applicants and sign application at both lic Agency and wil water will be made, give name and adult rights except those on finding the page 3 if necessary.  The acres general crops the various statements as to acres about Beginning date all to be utilized is Different to be used through the proposer capable of being general of be applied is For distribution a man of which power is to be dis inches.	See supplement State net acres; I eage are consistent with each oth and end a  and end a  see between nozzle or draft tube water benstock is nerated by the works is ced.  developed is Turbine, Pelton when in	Season of Use  se to be irrigated  cres; alfalfa  casture  er, with the statem  Closing date  level and first free water  and feet × fall ÷ 8.8	y of water under with him. PCWA Acter which water is served.  Source of Other Supply  acres.  acres.  ent in Paragraph 11, and with the surface above cubic feet per second horsepower.

FORM 61-A

### **IMPORTANT**

#### [Please Read Carefully]

- 1. Note the terms and conditions of this permit. Construction work must be prosecuted, and the water applied to the beneficial uses intended with due diligence. Annual reports of progress will be expected from you upon forms which will be furnished for the purpose. When the water has been fully applied to the beneficial uses intended the Water Code requires that you notify the State Water Rights Board thereof.
- 2. Neither this application nor the permit is a water right, but if the terms and conditions of the permit are observed a water right can be obtained through beneficial use of the water—the extent of the right to be determined by a field inspection which will be made by a representative of the State Water Rights Board.
- 3. No change in point of diversion, or place of use or character of use, can be made under this application and permit without the approval of the State Water Rights Board.
- 4. If the rights under this permit are assigned immediate notice to that effect with the name and address of the new owner should be forwarded to the State Water Rights Board, Sacramento, California.
- 5. Please advise immediately of any change of address. Until otherwise advised communications will be sent to the address used in the letter transmitting this permit.

  Page 297 of 534

16130 3-60 2M SPO

## PERMIT No. 13858

This is to certify that the application of which the foregoing is a true and correct copy has been considered and approved by the State Water Rights Board SUBJECT TO VESTED RIGHTS and the following limitations and conditions:

- l. The amount of water appropriated shall be limited to the amount that can be beneficially used and shall not exceed, (a) 800 cfs by direct diversion from about November 1 of each year to about July 1 of the succeeding year from North Fork American River, (b) 10,000 af by storage from about November 1 of each year to about July 1 of the succeeding year from Middle Fork American River at French Meadows Reservoir, (c) 36,000 af by storage from about November 1 of each year to about July 1 of the succeeding year from Rubicon River at Hell Hole Reservoir, (d) 13,000 af by off-stream storage from about November 1 of each year to about July 1 of the succeeding year from South Fork Long Canyon at a maximum rate of diversion of 830 cfs to be stored at Hell Hole Reservoir, (e) 7,000 af by off-stream storage from about November 1 of each year to about July 1 of the succeeding year from North Fork from about November 1 of each year to about July 1 of the succeeding year from North Fork Long Canyon, at a maximum rate of diversion of 830 cfs, to be stored at Hell Hole Reservoir.
- 2. The maximum amount of water to be diverted to storage under this permit and permits issued pursuant to Applications 18084, 18085 and 18086 during any one season shall not exceed (a) 133,700 acre-feet at French Meadows Reservoir and (b) 208,400 acre-feet at Hell Hole (a) Reservoir.
- 3. The maximum amounts herein stated may be reduced in the license if investigation warrants.
- 4. Actual construction work shall begin on or before September 1, 1963, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.
  - 5. Construction work shall be completed on or before December 1, 1967.

(0000008)

- 6. Complete application of the water to the proposed use shall be made on or before December 1, 2007.
- 7. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued. (000010)
- 8. All rights and privileges under this permit including methods of diversion, method of use, and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.
- 9. This permit is subject to the prior rights of any county in which the water sought to be appropriated originates to the use of such water as may be necessary for the development of such county as provided for in Section 10505 of the Water Code.

  (0000999)
- 10. To the extent that their provisions relate to matters within the jurisdiction of the State Water Rights Board, this permit is subject to stipulations and agreements between the permittee and the California Department of Fish and Game, dated July 20, 1962, San Juan Suburban Water District et al., dated May 21, 1962, Sacramento Municipal Utility District, dated May 21, 1962, and the City of Sacramento, dated May 21, 1962, which were filed for record at the hearing on Applications 18084, 18085, 18086, and 18087 as Placer County Water Agency (0430919)
- 11. This permit does not authorize collection of water to storage during the period outside of the collection seasons specified in Paragraph 1, to offset evaporation or seepage losses or for any other purpose.  $\begin{pmatrix} 0.000051 \end{pmatrix}$
- 12. Permittee shall allow representatives of the State Water Rights Board and other parties as may be authorized from time to time by said Board reasonable access to project works to determine compliance with the terms of this permit.



L. K. Hill Executive Officer vegetation which would interfere with the use of the reservoir for water storage and (0120050) recreational purposes.

14. This permit is subject to compliance by permittee with Section 10504.5 (a) of the Water Code.

15. Separate applications for approval of plans and specifications for construction of the dams described in this approved water right application shall be filed with and approved by the Department of Water Resources prior to commencement of construction of the dams. (0360048)

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceeds ings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: JAN 1 0 1963



STATE WATER RIGHTS BOARD

L. St. Hill L. K. Hill

Executive Officer

## DO NOT WRITE IN THIS SPACE

Sunset City. New Castle, Auburn, Jaincoln having a present population of 27,000 Penzyn and Gapital City The estimated average daily consumption during the month of maximum use at the end of each five-year period until the full mount applied for is put to beneficial use in as follows: Acre-feet per day 1970 - 1355			rving ROBEVIIIE, ROCKI	
to estimated average daily consumption during the month of maximum use at the end of each five-year period until the full mount applied for is put to beneficial use is as follows: Acre-feet per day  1970 - 132 1995 - 240 2000 - 420  1975 - 167 1990 - 294 2005 - 487  1980 - 200 1995 - 354 2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is nade the nature of the mines is and the nature of the mines is dealer will be considered will be polluted by chemicals or otherwise.  **Laptable nature of pillowing are mines. State that the ultimate water requirement for this project will be considered will not be polluted by chemicals or otherwise.  **Laptable nature of pillowing are mines. State that it developes and it will not be polluted by chemicals or otherwise.  **Laptable nature of pillowing are mines. State that it developes and it will not be polluted by chemicals or otherwise.  **Laptable nature of pillowing are mines. State that it developes are mines are developed are mines are developed.  **Placer County and land developers in the county are initiating a campaign to attract industrial development in western Placer County. Water will be required. Development are progressed to the extent that significant predictions can be made at this times are profitedly the time required for filing name.  19. Does the applicant own the land at the proposed point of diversion?  **Year No.***  **Year No.*	Sunset City, New Car Penryn and Capital	stle, Auburn, Lincoln <sub>havi</sub> Citv	ng a present population of	27,000
1970 - 133  1985 - 240  2000 - 1480  1975 - 167  1980 - 200  1995 - 3514  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is none state of them mining property to be served in none and the nature of the mines is and the nature of the mines is code please, course, sec.  The method of utilizing the water is the estimated that the ultimate water requirement for this project will be cate for per month, gallon per mines. But hold of mileses will not be polluted by chemicals or otherwise.  It is estimated that the ultimate water requirement for this project will be cate for per month, gallon per mines. But hold of mileses will not be returned to the water will not be returned to the water will not be returned to the water mines.  It is estimated that the ultimate water requirement for this project will be the water will not be returned by the water of the water of perfect on the country of the proposed reason of the perfect	-	•	m use at the end of each five-year	period until the full
1970 - 133  1985 - 240  2000 - 1480  1975 - 167  1980 - 200  1995 - 3514  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is none state of them mining property to be served in none and the nature of the mines is and the nature of the mines is code please, course, sec.  The method of utilizing the water is the estimated that the ultimate water requirement for this project will be cate for per month, gallon per mines. But hold of mileses will not be polluted by chemicals or otherwise.  It is estimated that the ultimate water requirement for this project will be cate for per month, gallon per mines. But hold of mileses will not be returned to the water will not be returned to the water will not be returned to the water mines.  It is estimated that the ultimate water requirement for this project will be the water will not be returned by the water of the water of perfect on the country of the proposed reason of the perfect	mount applied for is put to b	peneficial use is as follows: Acre-feet	per day	
1975 - 167  1990 - 294  2005 - 487  1980 - 200  1995 - 354  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is	•			
1980 - 200  1995 - 354  2010 - 560  2015 - 667  16. Mining Use. The name of the mining property to be served is none and the nature of the mines is and the nature of the mines is of the method of utilizing the water is.  1. is estimated that the ultimate water requirement for this project will be Colif for pre-cased, piless per minor. Thus bain of orders will not be polluted by chemicals or otherwise.  1. Explais auter of pollutein, if any miles per minor. Thus bain of orders will not be returned to State theorem and finding the water of the use proposed is recreational, and industrial I		1990 - 294	2005 - 487	
16. Mining Use. The name of the mining property to be served is				
and the nature of the mines is.  Gold placer, quarth, sec.  The method of utilizing the water is.  It is estimated that the ultimate water requirement for this project will be Calif fort you need, gallous per minor. State bails of orthogonal will not be polluted by chemicals or otherwise.  It yill not be polluted by chemicals or otherwise.  It yill not be returned to	1980 - 200	1995 - 354	2010 <b>-</b> 560 2015 <b>-</b> 667	
and the nature of the mines is  Gait place, quart, sec.  The method of utiliting the water is.  It is estimated that the ultimate water requirement for this project will be Calif feer per mosel, pillung per minest. Status buts of orthogonal will not be polluted by chemicals or otherwise.  Tapina nature of pollutes, if any in the water will not be polluted by chemicals or otherwise.  The matter of pollutes, if any in the water will not be returned to the water will not be returned to the water of pollutes, if any in the water of pollutes, if any in the	16. Mining Use. The name	e of the mining property to be served is	none	
to sestimated that the ultimate water requirement for this project will be Calle for per second, gillous yes minute. Stand basis of sestimated that the ultimate water requirement for this project will be Calle for per second, gillous yes minute. Stand basis of sestimated will not be polluted by chemicals or otherwise.  Stand Sta			es is	
tis estimated that the ultimate water requirement for this project will be Cable for presented, gallets per minor. Note that it will not be polluted by chemicals or otherwise.    Explain autor of pollution, it say	he method of utilizing the v	water is	•	
The water will not be polluted by chemicals or otherwise trying nature of publishin, if very and it will not be returned to the control of the will not be returned to the control of the control of the use proposed is recreational and industrial the proposed of the basis of determination of amount needed. Recreation on, and in the vicinity of the proposed reservoirs is contemplated.  Number of purson, reduces, tern of domestic lives and greden, number and kind of such, typs reservoirs as contemplated.  Number of purson, reduces, tern of domestic lives and greden, number and kind of such, typs replacer Country and land developers in the country are initiating a campaign to attract industrial development in western Placer Country. Water will be required. Development has not progressed to the extent that significant predictions can be made at this times and progressed to the extent that significant predictions can be made at this times and the specifically the time required for filing same.  19. Does the applicant own the land at the proposed point of diversion?  No. If not, give name and deters of owner and state what steps have been taken to secure right of access thereto. Applicant will obtain use permit to use National Forest land and will purchase or exercise power of sminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of victsion?  U. S. Bureau of Reclamation				
In the will not be returned to Note treams of the use proposed is recreational and industrial Indus				
General  18. Are the maps as required by the Rules and Regulations filed with Application?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  20. What is the name of the post office most used by those living near the proposed point of diversion?  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  22. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  22. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?	The water will not be polluted	l by chemicals or otherwise	ure of pollution, if any	
General  18. Are the maps as required by the Rules and Regulations filed with Application?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. What is the name of the post office most used by those living near the proposed point of diversion?  20. What is the name of the post office most used by those living near the proposed point of liversion?  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  22. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  23. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  24. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  25. Bureau of Reclamation	nd it will not be returned	Name stream	State 40-acre subdivision	of
Recreation on, and in the vicinity of the proposed reservoirs is contemplated.  Number of person, residences, area of dementic lawar and gardens, number and lind of reck, types reducted use, and unit requirements.  Placer County and land developers in the county are initiating a campaign to attract industrial development in western Placer County. Water will be required. Development has not progressed to the extent that significant predictions can be made at this times and a progressed to the extent that significant predictions can be made at this times especifically the time required for filing same.  19. Does the applicant own the land at the proposed point of diversion?  Yes No.  Yes No.  If not, give name and address of owner and state what steps have been taken to secure right of access thereto. Applicant will obtain use permit to use National. Forest land and will purchase or exercise power of sminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation				
Recreation on, and in the vicinity of the proposed reservoiring is contemplated.  Number of person, residences, are of dementic lawar and garden, number and land developers in the county are initiating a campaign to attract industrial development in western Placer County. Water will be required. Development has not progressed to the extent that significant predictions can be made at this times and specifically the time required by the Rules and Regulations filed with Application?  Yes  Yuer No  If not, Yuer No  19. Does the applicant own the land at the proposed point of diversion?  Yuer No  If not, give name and address of owner and state what steps have been taken to secure right of access thereto. Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  U. S. Bureau of Reclamation  City of Sacramento	17 Other Uses. The nat	ture of the use proposed is recreat	tional and industrial	
reservoirs is contemplated.  dustrial us, and unit requirements  Placer County and land developers in the county are initiating a campaign to attract industrial development in western Placer County. Water will be required. Developme has not progressed to the extent that significant predictions can be made at this ti  General  18. Are the maps as required by the Rules and Regulations filed with Application?  Yes  Year No  19. Does the applicant own the land at the proposed point of diversion?  Year No  If not, give name and ddress of owner and state what steps have been taken to secure right of access thereto.  Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	17. Conci Osco. The nac	Indust	rial, recreational, domestic, stockwatering, fish c	ulture, etc.
The specifically the time required by the Rules and Regulations filed with Application?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant own the land at the proposed point of diversion?  19. Does the applicant what steps have been taken to secure right of access thereto.  19. Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  City of Sacramento				
19. Does the applicant own the land at the proposed point of diversion?  NO	industrial developments has not progressed	ent in western Placer County to the extent that significa	. Water will be requi	red. Developme
19. Does the applicant own the land at the proposed point of diversion?  NO Year No  Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments of the progressed	ent in western Placer County to the extent that significate General	. Water will be requi	red. Developme
19. Does the applicant own the land at the proposed point of diversion?  NO Year No  Applicant will obtain use diversion access thereto. Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California.  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments of the progressed	ent in western Placer County to the extent that significate General	th Application? Yes	red. Developme
ddress of owner and state what steps have been taken to secure right of access thereto. Applicant will obtain use permit to use National Forest land and will purchase or exercise power of eminent domain to acquire privately owned land.  20. What is the name of the post office most used by those living near the proposed point of diversion?  Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of iversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments has not progressed.  18. Are the maps as required tate specifically the time required.	ent in western Placer County to the extent that significate  General ed by the Rules and Regulations filed wi	th Application? Yes	red. Developme made at this ti
Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments has not progressed.  18. Are the maps as required tate specifically the time required.	ent in western Placer County to the extent that significate  General ed by the Rules and Regulations filed wi	th Application? Yes Yes or No	made at this ti
Auburn, California  21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments has not progressed  18. Are the maps as required tate specifically the time required 19. Does the applicant own ddress of owner and state which permit to use Nation	General  ed by the Rules and Regulations filed with aired for filing same  the land at the proposed point of diversitat steps have been taken to secure right on the land and will pur	th Application? Yes  Yes or No  1 access thereto Applicant chase or exercise power.	red. Developme made at this ti  . If not,  f not, give name and will obtain use er of eminent
21. What are the names and addresses of claimants of water from the source of supply below the proposed point of liversion?  U. S. Bureau of Reclamation  City of Sacramento	industrial developments has not progressed  18. Are the maps as required tate specifically the time required 19. Does the applicant own ddress of owner and state which permit to use Nation domain to acquire progression.	General  ed by the Rules and Regulations filed with a the proposed point of diversitat steps have been taken to secure right on the land at the proposed and will purrivately owned land.	th Application? Yes  Yes or No  Yes or No  faccess thereto Applicant chase or exercise power	red. Developme made at this ti made at this ti
iversion? U. S. Bureau of Reclamation  City of Sacramento	industrial developments has not progressed  18. Are the maps as required tate specifically the time required 19. Does the applicant own didress of owner and state which permit to use National domain to acquire possible 20. What is the name of the	General  ed by the Rules and Regulations filed with at steps have been taken to secure right on the land at the proposed point of diversity at steps have been taken to secure right on the land at the proposed and will purrivately owned land.  e post office most used by those living near	th Application? Yes  Yes or No  Ten or No  Application Applicant chase or exercise power  The proposed point of diversion?	red. Developme made at this ti made at this ti
City of Sacramento	industrial developments has not progressed  18. Are the maps as require tate specifically the time required to the applicant own didress of owner and state who permit to use Nation domain to acquire possible 20. What is the name of the Auburn, California	General  ed by the Rules and Regulations filed with aired for filing same  the land at the proposed point of diversity at steps have been taken to secure right on the land at the proposed and will purrivately owned land.  e post office most used by those living near	th Application? Yes Yes or No  1 access thereto Applicant ochase or exercise powers the proposed point of diversion?	red. Developme made at this ti
	industrial developments has not progressed  18. Are the maps as require tate specifically the time required 19. Does the applicant own ddress of owner and state who permit to use Nation domain to acquire possible 20. What is the name of the Auburn, California	General  ed by the Rules and Regulations filed with aired for filing same  the land at the proposed point of diversity at steps have been taken to secure right on the land at the proposed and will purrivately owned land.  e post office most used by those living near	th Application? Yes Yes or No  1 access thereto Applicant ochase or exercise powers the proposed point of diversion?	red. Developme made at this ti
	18. Are the maps as require tate specifically the time requirement of the applicant own ddress of owner and state who permit to use Nation domain to acquire possible 20. What is the name of the Auburn, California 21. What are the names are	General  ed by the Rules and Regulations filed with aired for filing same  the land at the proposed point of diversity at steps have been taken to secure right on the land at the proposed and will purrivately owned land.  e post office most used by those living near and addresses of claimants of water from the daddresses of claimants of water from	th Application? Yes Yes or No  The or No Yes or No Applicant The proposed point of diversion? The proposed point of diversion? The source of supply below the	red. Developme made at this ti
	industrial developments has not progressed  18. Are the maps as required tate specifically the time required tate specifically the time required to use National domain to use National domain to acquire possible 20. What is the name of the Auburn, California 21. What are the names are liversion?	General  ed by the Rules and Regulations filed winited for filing same  the land at the proposed point of diversitat steps have been taken to secure right on all Forest land and will purrivately owned land.  e post office most used by those living near and addresses of claimants of water from the secure of the secure right on all forest land and will purrivately owned land.	th Application? Yes Yes or No  Test or No  f access thereto Applicant ochase or exercise power  the proposed point of diversion?  the source of supply below the	red. Developme made at this ti  . If not,  f not, give name and will obtain use of eminent  e proposed point of

[Signature of Applicant] /s/ L. L. Anderson Page 300 of 534\*

Chairman, Board of Birectors

#### Supplement to Application 18087

#### Paragraph 1 - Sources of Appropriation

- (2) (3) Middle Fork, American River
- Rubicon River
- (4a) South Fork, Long Canyon
- North Fork, Long Canyon (4b)
- Middle Fork, American River
- North Fork American River
- (4a) is tributary to (3)
- is tributary to (4a) (4b)
- (1) and (3) are tributary to (2) or (5)
- (5) and/or (6) are tributary to the North Fork, American thence the American River.

Supplement to Application 18087

Paragraph 2 (a) and (b) - Amount of Water

	STREAM	STRUCTURE	DIRECT DIVERSION Cubic feet per second	For Diversion to be stored and later applied to beneficial use-Acre-feet per annum	Name of Reservoir where water will be stored
2	M.F. American R.	French Meadows Dam and Reservoir		10,000	French Meadows
3•	Rubicon River	Hell Hole Dam and Reservoir		36,000	Hell Hole
4 <b>a</b>	S.F. Long Canyon	South Long Canyon Diversion		13,000*	Hell Hole
4ъ	N.F. Long Canyon	North Long Canyon Diversion		7,000*	Hell Hole
7	N.F. American Rive	er Auburn Diversion	800		

<sup>\*</sup> Maximum rate of diversion to storage 830 cubic feet per second North and South Forks.

Supplement to Application 18087

Paragraph 4 - Points of Diversion

L	$\sim$	$\sim$		m	T	$\sim$	ТЛT
٠.	U	U	A	1	1	v	7.4

Ref.	Stream	Diversion	Grid Coor	fornia rdinates, e II E	Mount Quarte	rs		k M
	Par. 4 - Points of Di	version						
2	M.F. American River	French Meadows	530,100	2,434,250	NW.NE	<b>3</b> 6	15	13
3	Rubicon River	Hell Hole	510,750	2,452,000	SW.SE	16	14	14
4a	S.F. Long Canyon	Long Canyon	507,675	2,434,250	SW.NE	24	14	13
4ъ	N.F. Long Canyon	Long Canyon	506,970	2,431,250	NW.SW	24	· 14	13
5	M.F. American River	Ralston Interbay	498,137	2,397,300	NW - NE	35	14	12
6	M.F. American River	Ralston Afterbay	490,160	2,357,100	NW.NW	3	13	11
7	N.F. American River	Auburn	444,400	2,267,400	ne .sw	23	12	8
	Par. 4 - Points of Re	e-diversion						
2	M.F. American R.	French Meadows	530,100	2,434,250	NW . NE	<b>3</b> 6	15	13
3	Rubicon River	Hell Hole	510,750	2,452,000	SW.SE	16	14	14
5	M.F. American River	Ralston Interbay	498,137	2,397,300	NW - NE	35	14	12
6	M.F. American River	Ralston Afterbay	490,160	2,357,100	NW . NW	3	13	11
7	N.F. American R.	Auburn	444,400	2,267,400	ne.sw	23	12	. 8

Supplement to Application 18087

Paragraph 6 - Intake or Headworks

Ref. No.	Stream	Name of Dam	D	imensions	(feet)	_Material
			Height	Length	Freeboard	·
	Par. 6 (b) - Diver	rsion Dams				
4a	S.F. Long Canyon	Long Canyon Diversion	37	230	7•5	Concrete
4 <b>b</b>	N.F. Long Canyon	Long Canyon Diversion	13	154	5	Concrete
5	M.F. American River	Ralston Interbay	75	212	10	Concrete
6	M.F. American River	Ralston Afterbay	90	500	5	Gravelfill
7	N.F. American River	Auburn Diversion	25	400	None	Concrete
	Par 6 (c) - St	orage Dams				
2	M.F. American River	French Meadows*	228	2700	5	Composite
3	Rubicon River	Hell Hole *	410	1570	20	Rockfill
	* Also serves as Dive	erting Dam				

# Supplement to Application 18087 Paragraph 7 - Storage Reservoirs

Ref.	Stream	Reservoir	Flood Lands in	Surface Area Acres	Capacity Acre-feet
<u>gundustaninini</u>	M. F. American River	French Meadows	See Map	1418	133,700
	Rubicon River	Hell Hole	See Map	1245	208,400

Supplement to Application 18087

Paragraph 13 - Irrigation Use

Description and Crop		Areas in Acres	
	Valley	Foothill	Total
Total Area	109,470	141,140	250,610
Irrigable Area	94,000	65,600	159,600
Probable Ultimate Pattern of land use			
Pasture and Hay	42,000	32,600	74,600
Rice	28,000		28,000
Orchard and Vinyard	5,000	23,000	28,000
General Crops including Truck	5,000	10,000	15,000)
Corn	5,000		5,000
Sorghums	9,000		9,000)

1930		Tunnel Horseshoe 16.0x16.0 Pressure	0.25	Oxbow (Regulator) M.F. American River	Ralston Afterbay M.F. American River
*004	0.0006	Tunnel Horseshoe 8x8 Pressure (lined)	3.14	Auburn Ravine	Auburn Diversion N.F. American River
830 830	0.0060	Tunnel 13.25x13.25 Pressure Horseshoe 10.58x11.42 Pressure	5.14 1.56	Ralston Powerplant Rubicon River	Relston Interbay M.F. American River
830	0.0045 & 0.0059	Tunnel Horseshoe 13.25x13.25 Pressure (unlined)	6•54	M.F. Powerplant M.F. American River	Long Canyon Diversion N.F. Long Canyon
830	0.0045	Tunnel Horseshoe 13.25x13.25 Pressure (unlined)	0.59	Long Canyon Diversion N.F. Long Canyon	<pre>Long Canyon Diversion S.F. Long Canyon</pre>
830	0.0045	Tunnel Horseshoe 13.25x13.25 Pressure (unlined)	3.29	Long Canyon Diversion S.F. Long Canyon	Hell Hole Reservoir Rubicon River
400	0.0040	<pre>Tunnel Horseshoe 12.5x12.5 Pressure (unlined)</pre>	2.78	French Meadows P.P. Rubicon River	French Meadows Reservoir M. F. American River

<sup>\*</sup> First Increment of diversion works for Western Placer County

THIS PAGI	E INTENT	IONALLY	LEFT BLAN	K

Appendix D-2	PG&E Contracts	
lacer County Water A	gencv	

### **ZONE 1 CONTRACT**

1	WATER SYSTEM SALE CONTRACT
2	BETWEEN
3	PACIFIC GAS AND ELECTRIC COMPANY
4	AND
5	PLACER COUNTY WATER AGENCY
6	
7	Pacific Gas And Electric Company (hereinafter "Pacific"
1 2 3 4 5 6 7 8 9	and Placer County Water Agency (hereinafter "Agency") enter into
9	this contract this 18th day of June , 1968, and agree as
10	
11	PARTS OF THE CONTRACT
12	1. This contract includes two appendices, designated:
13	Appendix A. Map of Agency Zone No. 1 and Pacific's
14	Lower Drum Division Water System.
15	Appendix B. Description of Properties To Be Sold.
16	COMMISSION APPROVAL
17	2. Pacific promptly shall file an application with
18	the Public Utilities Commission of the State of California
19	(handinafter "Commission") for an order authorizing Pacific to

Commission approval. If such order is not issued and effective by September 1, 1968, this contract shall be subject to cancellation as provided in Article 3 below.

to prosecution thereof as are reasonably necessary to obtain

carry out the terms of this contract, and shall prosecute such

application and any proceedings thereon diligently. Agency shall

join in such application and take such other steps with respect

26 27

20

**21** 

22

23

24

25

EXHIBIT A

#### CONDITIONS

3. The obligations under this contract shall be contingent on (a) Agency being able to complete its revenue bond financing as contemplated, (b) the parties obtaining Commission approval of this contract, and (c) the parties obtaining Commission approval of their Water Supply Contract, of even date. If these conditions are not met by September 1, 1968, either party may on that date, or at any time thereafter but before the said conditions are met, cancel this contract upon giving written notice thereof to the other and in such event neither party shall be liable to the other for any expenses occasioned by this contract. Neither party shall be obligated to accept terms or conditions which it deems unreasonable.

#### DEFINITIONS

- 4. When used herein, the following terms shall have the meanings hereinafter set forth:
- (a) Agency Zone No. 1 That area within Placer
  County so designated and shown on the map attached as Appendix A.
- (b) <u>System</u> Those water facilities and properties of Pacific to be conveyed under this contract as specified in Article 6, and replacements, additions and betterments thereto, within Agency Zone No. 1.
  - (c) Transfer Date September 1, 1968.

#### SALE AND PURCHASE

5. Pacific shall sell to Agency, and Agency shall buy from Pacific, the System, such sale and purchase to be made

for the price and on the terms and conditions hereinafter set fort

#### THE SYSTEM

- 6. The System to be sold and purchased under this contract consists of the following:
- (a) All of Pacific's water transmission and distribution system depicted generally on the map attached as Appendix A hereto including related parcels of real property, easements, rights of way, and other interests in land, as are reasonably necessary or useful in the operation and maintenance thereof. The properties to be sold are described in Appendix B hereto.
- (b) Any franchises, certificates of public convenience and necessity, permits, licenses, contracts and similar rights, privileges and obligations for the System and which are owned or possessed by Pacific on the Transfer Date; provided, that permits and licenses which cannot be legally transferred shall not be conveyed.
- (c) All installed pumps, pumping plants, treatment plants and associated equipment and structures, reservoirs and tanks, settling tanks, settling basins, canals and ditches, diversion works, transmission and distribution mains, pipes, siphons, wires, pipelines, fire hydrants, valves, connections, services, meters, meter installations, and associated facilities, meter history cards, records, maps and drawings relating to the ownership and operation of the properties to be transferred

- hereunder, including engineering, customer accounting and current billing records. Agency shall make all or any such cards, records, maps and drawings available to Pacific for inspection or copying as may be necessary from time to time after Agency acquires possession thereof.
  - (d) Tools and equipment owned by Pacific on the Transfer Date and used in the operation and maintenance of the System, as agreed upon by the parties at that time.
- (e) Materials and supplies which are applicable to the System and can be made available and are on hand in Pacific's Auburn warehouse as of the Transfer Date shall be inventoried and appraised by Pacific at the request of Agency at its then present market value and Agency shall have the right to purchase said materials and supplies from Pacific at such appraised value, plus any applicable sales taxes.

#### PURCHASE PRICE

7. Agency shall pay Pacific \$1,198,000.00 for the System, which amount constitutes the agreed-to selling price as of January 1, 1968.

#### COST ADJUSTMENT

8. The parties have agreed that the selling price stated in Article 7 is the agreed-to consideration as of January 1, 1968, and that for accounting purposes the purchase and sale transaction will be treated substantially as if the actual conveyance occurred on that date. Accordingly:

9.

- Agency shall reimburse Pacific for all expenditures made by Pacific in the operation and maintenance of the System, and for additions, replacements and betterments, on and after January 1, 1968. Expenditures under this Article shall be as determined pursuant to Pacific's Auditing Department Standard Practice No. 117.1-1, as that Standard Practice may be amended or superseded, or other equitable method as shall be mutually acceptable to Pacific and Agency, and shall also include property taxes, and possessory interest taxes and assessments, if any, incurred by Pacific and ascribable to such period.
- Agency shall pay Pacific for water used for delivery to customers taking water from the System and to those customers referred to in Article 14, between January 1, 1968, and the Transfer Date at the rates applicable, under the parties! Water Supply Contract of even date, for the purchase of water during the twelve month period ending June 30, 1969.
- Pacific shall credit Agency with all Revenue received from the System ascribable to such period.
- Pacific shall prepare a net statement as to such reimbursement, payment and crediting under paragraphs (a), (b) and (c) above, and the party owing the balance shall promptly 1 8 pay the net amount to the other.
- (e) Said statement shall be prepared as soon after the Transfer Date as is practicable and shall be paid

promptly. Any disputes involving such net statement shall be subject to arbitration as provided in Article 20.

#### SYSTEM MAINTENANCE PRIOR TO TRANSFER DATE

9. Pacific shall, during the period prior to the Transfer Date, operate the System and maintain it in good condition in the best utility practice and make only such additions and betterments as are necessary or consistent with the Agency's proposed capital improvement plan for the System; provided; that no single capital expenditure in excess of \$2,000 shall be made during such period unless consent of the Agency's General Manager is first obtained, or unless emergency action is required as determined by Pacific.

#### TAXES

- Transfer Date occurs shall be cleared and paid in the manner required by Section 4986 of the Revenue and Taxation Code. From the amount due hereunder for the applicable transfer, Agency is authorized to pay any delinquent taxes due in any fiscal year except the fiscal year in which the Transfer Date occurs, together with penalties and interest thereon, and any delinquent or non-delinquent assessments or assessment bonds.
- (b) Agency shall reimburse Pacific on demand for the amount of any sales tax which may be levied or assessed as a result of the transfers of the properties or any interest

therein pursuant to this agreement. Agency shall assume all responsibility and expense in contesting any such tax.

## (c) Agency shall pay any documentary stamp taxes. CONVEYANCE AND WARRANTIES

- 11. (a) The conveyance is without warranties of title to any of the properties to be conveyed hereunder. A quitclaim deed shall be used.
- (b) Pacific does not warrant the assignability or transferability of the lands, easements, leases, permits, licenses, or contracts and rights of way held by Pacific to be conveyed to Agency hereunder. If any consents are required for any such assignments or transfers, Agency shall be responsible for obtaining such consents and Pacific shall use its best efforts to secure and to assist Agency in securing such consents.
- (c) Conveyances and assignments hereunder and the payment of the purchase price under Article 7 shall be made as follows:
  - (1) At least 10 days prior to the Transfer Date, Agency shall open an escrow with a mutually agreed upon escrow holder in Placer County. On or before the Transfer Date, Agency shall deposit in said escrow the amount specified in Article 7.
  - (2) Prior to the Transfer Date, Pacific shall deposit in said escrow good and sufficient deeds, bills of sale, assignments and other documents conveying the properties, facilities and equipment specified in Article 6.

3
4
5
6
7
8
9.
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

	(3)	) The	escr	ow sha	all (	close,	tit	tle to	the	3
said	proper	ties,	facili	lties	and	equip	nent	shal:	l ve	est
in Ag	ency, a	and pa	yment	there	efor	shall	be	made,	on	the
Trans	fer Dat	te.						(1)		

- (4) Payment of the purchase price shall be made to Wells Fargo Bank, Trustee under Pacific's First and Refunding Mortgage Indenture, dated December 1, 1920, in San Francisco, California.
- (5) Agency shall pay all escrow and recording fees incurred in this transaction, and if title insurance is desired by Agency, the premium charged therefor.
- (d) Pacific shall, within six months after the conveyance of the System pursuant to this contract, secure the necessary release and discharge of said properties and facilities from the effect of any indebtedness of Pacific.

#### ACCOUNTS RECEIVABLE AND DEPOSITS

12. (a) Accounts receivable for the System for service furnished by Pacific prior to January 1, 1968, shall not be transferred with the System. Deposits for water service held by Pacific which guarantee payment of water bills shall be applied by Pacific to the closing bills and any excess refunded to the customers. Agency does not assume any liability for repayment to customers of such deposits.

6

5

9 10

8

11

13 14

15

16

17

18

19 20

21

22

23

24

25

26

27

28

Agency shall assume and perform the obligations of Pacific under all water main extension agreements relating to the System to which Pacific is a party as of the Transfer Date, and in accepting payment of the purchase price for the System Pacific shall assign to Agency all of its rights in and under said extension agreements, except Pacific's rights to all sums of money deposited with and held by Pacific under and pursuant to the provisions of said agreements. Agency shall make refunds when due to the holders of said extension agreements in accordance with the refunding provisions of said extension agreements. Pacific shall pay to Agency the amount of any and all refunds made by Agency to the holders of said extension agreements, said payments to be made by Pacific not later than 30 days after the actual date of refund. Pacific shall supply Agency at or prior to the Transfer Date with an accounting of the deposits under said agreements, including the amounts refunded, the amounts thereof remaining to be refunded and the amounts of any unexpended portion thereof, together with copies of all main extension agreements pursuant to which such deposits were made.

## ASSUMPTION OF PUBLIC UTILITY OBLIGATION

13. Upon the Transfer Date, Agency shall undertake the distribution of water from the System. Agency shall assume as of that date any and all public service obligations resting

upon Pacific with respect to the System, and shall assume all of Pacific's obligations under any contracts, leases, permits, licenses, grants of rights of way or other conveyances transferred hereunder and accepted by Agency, except as otherwise provided hereunder.

#### CUSTOMERS NOT ON SYSTEM

Area which are not on canals constituting part of the System, other than Nevada Irrigation District, shall become customers of Agency on the Transfer Date and Agency shall assume all public service obligations resting on Pacific with respect to water service from such canals. Pacific shall continue to make water available to Agency for delivery to such customers at their respective points of delivery. Agency shall provide facilities for transferring service to such customers from canals owned by Pacific as soon as it is economically feasible for Agency to do so, and Pacific shall cooperate whenever possible in making such transfers.

#### PERMITS

15. Agency promptly shall obtain all necessary permits required for the sale and distribution of water from the System.

#### RISK OF LOSS

16. All risk of loss or injury or destruction to any and all of the properties covered by this agreement shall be upon Pacific at all times until the Transfer Date, and in the event of any such loss, injury, or destruction, the purchase price shall be

9.

Page 319 of 534

appropriately adjusted, but Pacific shall be entitled to retain any insurance or claims against any third party or insurance carrier relating to any such loss, injury or destruction.

#### INDEMNIFICATION

Pacific shall indemnify Agency against any costs and liabilities hereafter asserted against Agency arising out of acts, omissions or occurrences prior to the Transfer Date to the amount and extent atbributable to the operation of the System by Pacific prior to the Transfer Date, or arising out of Pacific's performance of, or failure to perform, its obligations under this contract; provided, that (1) Pacific shall have the right to contest at its own expense any such claims asserted against Agency attributable to Pacific's period of ownership of the System, (2) Agency promptly shall notify Pacific of the assertion of any such claims for which Agency will seek indemnification, and (3) Agency shall not enter into any agreement of compromise or settlement of any such claims for which Agency will seek indemnification without the prior written consent of Pacific.

Agency shall indemnify Pacific against any liabilities hereafter asserted against Pacific arising out of acts, omissions or occurrences on or after the Transfer Date to the amount and extent attributable to the operation of the System by Agency on or after the Transfer Date, or arising out

25

24

2

5

6

8

9.

10

11

12

13

14

15

16

17

18

19

20

21

26

of Agency's performance of, or failure to perform, its obliga-1 tions under this contract; provided, that (1) Agency shall 2 have the right to contest at its own expense any such claims 3 asserted against Pacific attributable to Agency's period of ownership of the System, (2) Pacific promptly shall notify 5 Agency of the assertion of any such claims for which Pacific 6 will seek indemnification, and (3) Pacific shall not enter into any agreement of compromise or settlement of any such claims 8 for which Pacific will seek indemnification without the prior 9. written consent of Agency. 10

#### SUCCESSORS IN INTEREST

18. This Contract shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto and all references in this agreement to Pacific shall be deemed to refer to and include successors and assigns of Pacific without specific mention of such successors or assigns and all references in this agreement to Agency shall be deemed to refer to and include successors and assigns of Agency (including, without limitation, any person or entity which shall acquire all or substantially all of the System) without specific mention of such successors or assigns.

#### HIRING SYSTEM EMPLOYEES

19. The Agency shall use its best efforts to hire those employees of Pacific whose positions are displaced as a result of the sale of the System to the Agency at classifications

26

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

27

and for compensation substantially similar to Pacific's if such employees of Pacific elect to transfer to Agency.

#### ARBITRATION

Any dispute that may arise under Article 8(d) . between Agency and Pacific shall, upon the written request of either party to the other, be submitted to and decided by arbitration. Each of the parties shall, within 30 days after giving or receiving such written notice, appoint one arbitrator. If either party fails to appoint an arbitrator within such time, he shall be appointed by a Superior Court of the State of California in accordance with the California Code of Civil Procedure. At any time that either arbitrator concludes they cannot agree, the two arbitrators shall appoint a third arbitrator or, if they cannot agree upon a third arbitrator, he shall be appointed by said Superior Court in accordance with said Code. A decision by two of the arbitrators shall be binding on the parties. If a decision cannot be reached within 90 days after appointment of the third arbitrator, on written notice by either party to the other, the arbitrators' authority shall terminate and either party may submit the matter to an appropriate court for decision. Each party shall bear the expenses and fees of the arbitrator appointed by it and its own expenses involved in the arbitration. The expenses and fees of the third arbitrator and all other expenses of arbitration shall be borne equally by Pacific and Agency.

26

27

1

2

5

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

	86 89 89 80 81							
	89 80 81 81 85							
1	IN WITNESS WHEREOF, on the date first above written, the parties hereto have subscribed this contract by their							
2	the parties hereto have subscribed this contract by their							
3	officers thereunto du	ly authorized.						
4	98	PLACER COUNTY WATER AGENCY						
5	99 60 60 60 60 60 60 60 60 60 60 60 60 60	2						
6	16 00 00 00 00 00 00 00 00 00 00 00 00 00	Ry /s/ FRANK I PAOLI						
7	60 60 60 61 61 60	By /s/ FRANK J. PAOLI Chairman of the Board of Directors	;					
. 8	(SEAL)	and						
9	(SEAL)	By /s/ ROBERT RADOVICH Secretary of the Board of Director						
10		Secretary of the Board of Director	<b>'</b> S					
11	60 60 60 60 60 61 61							
12	io pr ed ed ed ed ed ed	PACIFIC GAS AND ELECTRIC COMPANY						
13								
		By /s/ V. C. REDMAN Senior Vice President						
14	(SEAL)	and						
15								
16	61 60 60 60 60 60 60	By /s/ J. F. TAYLOR Secretary	_					
17								
18								
19	99 99 90 90 90 90 90 90							
20								
21		*						
22								
23	99 99 99 99 99 99 99 99 99 99 99 99 99							
- 24	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6							
25	ed de de de de de de de de de							
06								
26								
27								
28		-14- Signatures ge 323 of 534						

#### APPENDIX B

#### DESCRIPTION OF PROPERTIES

#### A - FEE LANDS

CHANNEL HILL RESERVOIR SITE: Situate in the SW-1/4 of the SW-1/4 of Section 35, T.13N., R.8E., M.D.B.& M., being the parcel of land conveyed to Pacific by deed from A. J. Morgan and wife by deed dated April 4, 1955 and recorded in the Official Records of Placer County in Volume 672 at page 165; the parcel of land conveyed to Pacific by deed from R. William Enderlin and wife dated April 25, 1955 and recorded in said Official Records in Volume 674 at page 387 and the parcel of land conveyed to Pacific by deed from Mary Elizabeth Morris, Executrix of the Estate of Charles Shepard Hutson dated May 17, 1963 and recorded in said Official Records in Volume 971 at page 124 and re-recorded in said Official Records in Volume 976 at page 244, together with the right of ingress and egress granted by said deed dated April 4, 1955. Said Channel Hill Reservoir site appears as Parcel 1 on State Board of Equalization Map No. 135-31-49B and Parcels 1 and 2 on State Board of Equalization Map No. 135-31-49A.

AUBURN WATER LOT: Situate in the SE-1/4 of the NW-1/4 of Section 2, T.12N., R.8E., M.D.B.& M., being the parcel of land conveyed to South Yuba Water Company predecessor in interest of Pacific by deed from R. G. Evenden and wife dated March 24, 1896 and recorded in Book 77 of Deeds at page 357, records of Placer County, and the parcels of land conveyed to Pacific by two deeds from Jennie E. Frost, one dated December 13, 1948 and recorded in said Official Records in Book 539 at page 385 and the other dated March 11, 1949 and recorded in said Official Records in Volume 545 at page 106 together with the right of way for road purposes granted by said deed dated December 13, 1948; excepting from the parcel of land conveyed by said deed dated March 24, 1896 the portion thereof lying within the boundary lines of the real property quitclaimed in the deed from Pacific Gas and Electric Company to Jennie E. Frost dated April 19, 1949 and recorded in said Official Records in Book 550 at page 172. Said Auburn Water Lot appears as Parcel 1 on State Board of Equalization Map No. 135-31-38.

That certain parcel of land situate in the N-1/2 of Section 25, T.13N., R.8E., occupied by a portion of Pacific's Lower Boardman Canal being the parcel of land described in and excepted from the deed from Pacific to Placer County Title Company dated August 1, 1961, recorded in said Official Records in Volume 886 at page 692. Said parcel of land appears as Parcels 1 and 2 on State Board of Equalization Map No. 135-31-41A.

AUBURN WATER LOT: Situate in the NW-1/4 of the SW-1/4 of Section 2, T.12N., R.8E., M.D.B.& M., being the parcel of land conveyed to Pacific by deed from Robert D. Sutherland and wife dated January 16, 1956 and recorded in said Official Records in Volume 694 at page 620, together with the rights of ingress and egress granted by said deed. Said Auburn Water Lot appears as Parcel 4 on State Board of Equalization Map No. 135-31-49.

AUBURN RESERVOIR SITE: Situate in the NE-1/4 of the NE-1/4 of Section 10, T.12N., R.8E., M.D.B.& M., being the parcel of land conveyed to F. Birdsall, predecessor in interest of Pacific by deed from C. A. Johnson dated November 30, 1887 and recorded in Volume VV of Deeds at page 267 records of Placer County; and the parcel of land conveyed to Pacific by deed from Ralph E. McNaughten and wife dated October 19, 1953 and recorded in said Official Records in Volume 638 at page 148 and the parcel of land conveyed to Pacific by deed from City of Auburn dated May 6, 1953 and recorded in said Official Records in Volume 629 at page 192 together with the rights granted by said deeds, excepting from said parcel of land conveyed by said deed dated November 30, 1887 the parcel of land conveyed by Pacific to Ralph E. McNaughten and wife by deed dated September 15, 1953 and recorded in said Official Records in Volume 688 at page 146, subject to the Boundary Line Agreement between Pacific and Ralph E. McNaughten and wife dated April 9, 1953 and recorded in said Official Records in Volume 626 at page 575. Said Auburn Reservoir site appears as Parcel 2 on State Board of Equalization Map No. 135-31-45.

Those certain parcels of land situate in the NE-1/4 of the SE-1/4 of Section 3, T.12N., R.8E., M.D.B.& M., occupied by a portion of Pacific's Lower Boardman Canal being the parcel of land described in and excepted as exceptions (b), (c) and (d) in the deed from Pacific to Jack Bolster and wife dated April 21, 1964, recorded in said Official Records in Book 1013 at page 23 and the parcel of land described in and excepted as exception (b) in the deed from Pacific to Herman Magness and wife dated April 21, 1964, recorded in said Official Records in Book 1013 at page 294. Said parcels of land appear as Parcels 1 and 2 on State Board of Equalization Map No. 135-31-7F.

SACRAMENTO STREET PUMP STATION: Situate in the City of Auburn in the SW-1/4 of the SW-1/4 of Section 15, T.12N., R.8E., M.D.B.& M., and being that certain parcel of land conveyed to Pacific by deed from Gus Berguist and wife dated February 21, 1963 and recorded in said Official Records in Volume 955 at page 369 and re-recorded in said Official Records in Volume 957 at page 257, said parcel of land appears as Parcel 1 on State Board of Equalization Map No. 135-31-53.

SKYRIDGE TANK SITE: Situate in the NE-1/4 of the NW-1/4 of Section 22, T.12N., R.8E., M.D.B.& M., being the parcel of land conveyed to Pacific by deed from G. S. Herrington and wife, dated August 31, 1962, and recorded in said Official Records in Volume 932 at page 242. Said parcel of land appears as Parcel 2 on State Board of Equalization Map No. 135-31-51.

CLOVER VALLEY RESERVOIR SITE: Situate in the S-1/2 of the SE-1/4 of Section 21 and in the NW-1/4 of the NE-1/4 of Section 28, T.12N., R.7E., M.D.B.& M., being the parcel of land conveyed to South Yuba Water Company, predecessor in interest of Pacific, by 2 deeds from James Thomson, one dated October 20, 1908, recorded in said Official Records in Book 116 at page 47; and the other dated May 21, 1909, recorded in said Official Records in Book 121 at page 113 and the parcel of land conveyed to South Yuba Water Company, predecessor in interest of Pacific by deed from J. H. Bickford dated October 17, 1908, recorded in said Official Records in Book 116 at page 30. Said Clover Valley Reservoir Site appears as Parcels 1 and 2 on State Board of Equalization Map No. 135-31-33.

That certain parcel of land situate in the N-1/2 of the NE-1/4 of Section 28, T.12N., R.7E., M.D.B.& M., conveyed to South Yuba Water Company, predecessor in interest of Pacific, by deed from W. R. Arthur dated July 10, 1909 and recorded in said Official Records in Book 121 at page 188. Said parcel of land appears as Parcel 8 on State Board of Equalization Map No. 135-31-8.

LOOMIS RESERVOIR SITE: Situate in the SE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M., being the parcel of land conveyed to South Yuba Water Company, predecessor in interest of Pacific, by deed from H. L. Taylor dated December 28, 1906, recorded in said Official Records in Book 103 at page 49. Said parcel of land appears as Parcel 3 on State Board of Equalization Map No. 135-31-9.

LOOMIS WATER TANK SITE: Situate in Section 3, T.11N., R.7E., being the parcel of land conveyed to Pacific by deed from Joseph H. Lausmann, Jr. and others dated February 10, 1961, recorded in said Official Records in Volume 866 at page 502. Said parcel of land appears as Parcel 2 on State Board of Equalization Map No. 135-31-50.

MAMMOTH RESERVOIR SITE: Situate in the E-1/2 of Section 12, T.11N., R.7E., M.D.B.& M., and the W-1/2 of Section 7, T.11N., R.8E., M.D.B.& M., being the parcel of land acquired by Pacific partly by deed to South Yuba Water Company, predecessor in interest of Pacific, from James Astill dated March 19, 1906, recorded in Book 96 of Deeds at page 30, records of Placer County; and by deed from Daniel Mason and others to Pacific dated September 4, 1915, recorded in Book 158 of Deeds at page 457, records of Placer County, and partly under that certain Act of Congress dated July 26, 1866 as amended. Said Mammoth Reservoir Site appears as Parcels 1 and 2 on State Board of Equalization Map No. 135-31-9 and Parcels 2 and 3 on State Board of Equalization Map No. 135-31-14.

ROCKLIN FILTRATION PLANT: Situate in the NW-1/4 of the NW-1/4 of Section 20, T.11N., R.7E., M.D.B.& M., being the parcel of land conveyed to Pacific by deed from Harry P. Tallman and wife dated August 25, 1948, recorded in said Official Records in Book 535 at page 45. Said parcel of land appears as Parcel 3 on State Board of Equalization Map No. 135-31-33.

MULDOON RESERVOIR SITE: Situate in the W-1/2 of the SW-1/4 of Section 8, T.11N., R.8E., M.D.B.& M. Said Muldoon Reservoir appears as Parcel 4 on State Board of Equalization Map No. 135-31-14.

LOOMIS WATER LOT: Situate in the SE-1/4 of the NE-1/4 of Section 9, T.11N., R.7E., M.D.B.& M., being the parcel of land conveyed to Pacific by deed from Martha E. Turner and others dated June 1, 1923, recorded in Book 209 of Deeds at page 274, records of Placer County and the parcel of land conveyed to Pacific by deed from Loomis Lumber Company dated November 23, 1948, recorded in said Official Records in Book 291 at page 360. Said Loomis Water Lot appears as Parcel 4 on State Board of Equalization Map No. 135-31-9 and Parcel 2 on State Board of Equalization Map No. 135-31-34.

NEWCASTLE SETTLING RESERVOIR: Situate in the SW-1/4 of the SE-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., being the parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, by deed from A. K. Robinson dated March 24, 1900 and recorded in Book 73 of Deeds at page 383, records of Placer County, reserving to Pacific an easement for road purposes within a strip of land of the uniform width of 30 feet extending entirely across said parcel of land and lying contiguous to and easterly of the westerly boundary line of said parcel of land. Said parcel of land appears as a portion of Parcel 1 on State Board of Equalization Map No. 135-31-8.

PENRYN WATER TREATMENT PLANT: Being the portion of the parcel of land situate in the NE-1/4 of the NW-1/4 of Section 35, T.12N., R.7E., M.D.B.& M., acquired by Pacific by deed from Howard Nakae and wife dated April 13, 1960 and recorded in said Official Records in Volume 832 at page 282 described as follows:

Beginning at the northeast corner of said parcel of land and running thence S. 10° 59' W., along the easterly boundary line of said parcel of land, 100.0 feet to the southeast corner of said parcel of land; thence N. 83° 43-1/2' W., along the southerly boundary line of said parcel of land, 65 feet to a point distant 65.0 feet westerly from, measured at a right angle to, the easterly boundary line of said parcel of land; thence N. 10° 59' E., parallel with said easterly boundary line, approximately 100 feet to a point in the northerly boundary line of said parcel of land; thence easterly, along the last mentioned boundary line, approximately 65 feet to the point of beginning; being a portion of Parcel 1 on State Board of Equalization Map No. 135-31-50.

CAPERTON RESERVOIR SITE: Situate in the SE-1/4 of the NW-1/4 and in the SW-1/4 of the NE-1/4 of Section 29, T.12N., R.7E., M.D.B.& M., being that certain parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, by deed from G. A. Deiter and others dated March 12, 1909 and recorded in Book 116 of Deeds at page 451, records of Placer County. Said parcel of land appears as a portion of Parcel 6 on State Board of Equalization Map No. 135-31-8.

ROSEVILLE REGULATOR SITE: Being that portion of the parcel of land situate in the NE-1/4 of the SE-1/4 of Section 30, T.11N., R.7E., M.D.B.& M., acquired by Pacific by deed from F. F. Metcalf dated May 12, 1941 and recorded in said Official Records in Book 416 at page 409 described as follows:

Beginning at the most northerly corner of said parcel of land and running thence S. 30° 02-1/2° E., along the northeasterly boundary line of said parcel of land, 304.9 feet to the most easterly

corner of said parcel of land; thence S. 49° 37-1/2' W., along the southerly boundary line of said parcel of land, 250 feet to a point distant 425.0 feet northeasterly from, measured at a right angle to, the southwesterly boundary line of said parcel of land; thence N. 40° 22-1/2' W., parallel with said southwesterly boundary line, 300.0 feet to a point in the northwesterly boundary line of said parcel of land; thence N. 49° 37-1/2' E., along the last mentioned boundary line, 304.7 feet, more or less, to the point of beginning.

Said Roseville Regulator Site appears as Parcel 3 on State Board of Equalization Map No. 135-31-25.

Together with the right to use the existing road across Pacific's adjoining lands for ingress to and egress from the parcel of land herein conveyed.

Subject to the right of the City of Roseville to install, maintain and use (a) a ditch in its existing location which lies contiguous to and northwesterly to the southeasterly boundary line of said Roseville Regulator Site and (b) a pipe trunk line extending southwesterly from the most southerly corner of Roseville Reservoir.

#### B - CANALS AND PIPELINES

That portion of the LOWER BOARDMAN CANAL which begins at the downstream side of the delivery point gaging station in the NE-1/4 of the NW-1/4 of Section 19, T.13N., R.9E., M.D.B.& M., and runs thence southwesterly through T.13N., R.9E.; T.13N., R.8E.; T.12N., R.8E.; T.11N., R.8E.; and T.11N., R.7E., all in M.D.B.& M., approximately 28.49 miles to its terminus in the NE-1/4 of the SE-1/4 of Section 30, T.11N., R.7E., M.D.B.& M.

That portion of the LOWER BOWMAN CANAL which begins at the downstream side of the delivery point gaging station in the SE-1/4 of the SW-1/4 of Section 13, T.13N., R.8E., M.D.B.& M., and runs thence southwesterly, northwesterly and southerly through Sections 13, 24, 14, and 23 of said Township and Range approximately 1.36 miles to its terminus in the NW-1/4 of the SW-1/4 of said Section 24.

LOWER BOWMAN PIPE: Beginning in the NW-1/4 of the SW-1/4 of Section 24, T.13N., R.8E., M.D.B.& M., and running thence southerly through Sections 24, 23, 26, 25, and 35 of said Township and Range approximately 2.35 miles to its terminus in the SE-1/4 of the NW-1/4 of said Section 35.

BOWMAN EAST PIPELINE: Beginning at the Bowman pipe in the SE-1/4 of the NW-1/4 of Section 35, T.13N., R.8E., M.D.B.& M., and running thence East approximately 0.28 mile to its terminus in the SW-1/4 of the NE-1/4 of said Section 35.

AUBURN CANAL AND PIPE: Beginning at the Lower Boardman Canal in the SE-1/4 of the SW-1/4 of Section 35, T.13N., R.8E., M.D.B.& M., and running thence southerly through said Section 35 and Sections 2, 3, 10, and 11, T.12N., R.8E., M.D.B.& M., approximately 2.15 miles to its terminus in the NW-1/4 of the SW-1/4 of said Section 11.

AUBURN TREATED WATER SUPPLY PIPE: Beginning in the SE-1/4 of the NW-1/4 of Section 2, T.12N., R.8E., M.D.B.& M., and running thence southwesterly through Sections 2, 3, and 10 of said Township and Range, approximately one mile to its terminus at the Auburn Reservoir in the NE-1/4 of the NE-1/4 of said Section 10.

FREEMAN PIPE: Beginning in the SW-1/4 of the SW-1/4 of Section 35, T.13N., R.8E., M.D.B.& M., and running thence westerly approximately 0.27 mile to its terminus at the Freeman Canal in the NW-1/4 of the NE-1/4 of Section 3, T.12N., R.8E., M.D.B.& M.

FREEMAN CANAL: Beginning in the NW-1/4 of the NE-1/4 of Section 3, T.12N., R.8E., M.D.B.& M., and running thence northerly, westerly and southerly through said Section 3, Section 34, T.13N., R.8E., M.D.B.& M., and Sections 4 and 10, T.12N., R.8E., M.D.B.& M., approximately 3.08 miles to its terminus in the SW-1/4 of the NW-1/4 of said Section 10.

SHOCKLEY CANAL: Beginning in the NW-1/4 of the NE-1/4 of Section 3, T.12N., R.8E., M.D.B.& M., and running thence southerly approximately 0.63 mile to its terminus in the SW-1/4 of the NE-1/4 of said Section 3.

EDGEWOOD CANAL: Beginning at the Freeman Canal in the SE-1/4 of the NE-1/4 of Section 4, T.12N., R.8E., M.D.B.& M., and running thence southwesterly approximately 0.19 mile to its terminus at the Fiddler Green-Boardman Canal Diversion Canal in the NE-1/4 of the SE-1/4 of said Section 4.

BOARDMAN-FIDDLER GREEN DIVERSION CANAL: Beginning at the Middle Fiddler Green Canal at the downstream side of the delivery point gaging station in the SE-1/4 of the NE-1/4 of Section 4, T.12N., R.8E., M.D.B.& M., and running thence southeasterly approximately 1.08 miles to its terminus at the Lower Boardman Canal in the NW-1/4 of the NE-1/4 of Section 10 of said Township and Range.

SHIRLAND CANAL: Beginning at the Lower Boardman Canal in the SE-1/4 of the SW-1/4 of Section 15, T.12N., R.8E., M.D.B.& M., and running thence southerly and westerly through Sections 15, 22, 21, 27, 28, and 33 of said Township and Range approximately 5.39 miles to its terminus in the NW-1/4 of the NE-1/4 of said Section 33.

SHIRLAND STUB: Beginning at the Shirland Canal in the NE-1/4 of the NW-1/4 of Section 27, T.12N., R.8E., M.D.B.& M., and running thence southerly approximately 0.68 mile to its terminus in the SE-1/4 of the SW-1/4 of said Section 27.

<u>UPPER GREELEY CANAL:</u> Beginning at the Lower Boardman Canal in the SW-1/4 of the SE-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., and running thence southerly through Sections 20, 29, and 32 of said Township and Range approximately 2.21 miles to its terminus in the SE-1/4 of the SW-1/4 of said Section 32.

LOWER GREELEY CANAL: Beginning at the downstream side of the delivery point gaging station in the SE-1/4 of the SW-1/4 of Section 32, T.12N., R.8E., M.D.B.& M., and running thence southerly through said Section 32 and through Sections 5 and 8, T.11N., R.8E., M.D.B.& M., approximately 2.35 miles to its terminus at the Muldoon Reservoir in the NW-1/4 of the SW-1/4 of said Section 8.

GAYLORD CANAL: Beginning at the Upper Greeley Canal in the SW-1/4 of the SE-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., and running thence easterly approximately 0.53 mile to its terminus in the NE-1/4 of the NE-1/4 of Section 29 of said Township and Range.

JAMISON PIPE: Beginning at the Upper Greeley Canal in the NE-1/4 of the NW-1/4 of Section 29, T.12N., R.8E., M.D.B.& M., and running thence westerly approximately 0.76 mile to its terminus in the NE-1/4 of the NE-1/4 of Section 30 of said Township and Range.

MONTE RIO PIPE: Beginning at the Lower Greeley Canal in the NW-1/4 of the NE-1/4 of Section 5, T.11N., R.8E., M.D.B.& M., and running thence easterly and southerly approximately 1.02 miles to its terminus in the NW-1/4 of the SW-1/4 of Section 4 of said Township and Range.

ROCK SPRING CANAL: Beginning at the Lower Boardman Canal in the SW-1/4 of the NW-1/4 of Section 29, T.12N., R.8E., M.D.B.& M., and running thence southerly approximately 1.94 miles to its terminus in the SE-1/4 of the SW-1/4 of Section 31 of said Township and Range.

MARING CANAL: Beginning at the Rock Spring Canal in the SW-1/4 of the NE-1/4 of Section 31, T.12N., R.8E., M.D.B.& M., and running thence easterly and southerly approximately 0.42 mile to its terminus in the NW-1/4 of the SE-1/4 of said Section 31.

SUGAR LOAF CANAL: Beginning at the Lower Boardman Canal in the SE-1/4 of the  $\overline{\text{NE-1/4}}$  of Section 1, T.11N., R.7E., M.D.B.& M., and running thence westerly approximately 1.32 miles to its terminus in the NE-1/4 of the SE-1/4 of Section 2 of said Township and Range.

<u>PERRY CANAL:</u> Beginning at the Lower Boardman Canal in the NE-1/4 of the NE-1/4 of Section 12, T.11N., R.7E., M.D.B.& M., and running thence southerly approximately 1.35 miles to its terminus in the NW-1/4 of the NW-1/4 of Section 13 of said Township and Range.

BARTON CANAL: Beginning at the Perry Canal in the SE-1/4 of the NE-1/4 of Section 12, T.11N., R.7E., M.D.B.& M., and running thence westerly approximately 0.98 mile to its terminus at Leak's Reservoir in the SE-1/4 of the NW-1/4 of said Section 12.

WEST PERRY CANAL: Beginning at the southerly terminus of the Perry Canal in the NW-1/4 of the NW-1/4 of Section 13, T.11N., R.7E., M.D.B.& M., and running thence westerly and southerly approximately 0.25 mile to its terminus at the Lower Boardman Canal in the SW-1/4 of the NW-1/4 of said Section 13.

EAST PERRY CANAL: Beginning at the southerly terminus of Perry Canal in the NW-1/4 of the NW-1/4 of Section 13, T.11N., R.7E., M.D.B.& M., and running thence southerly approximately 0.75 mile to its terminus at the Boardman Canal in the SW-1/4 of the NW-1/4 of said Section 13.

<u>TURNER CANAL:</u> Beginning at the Lower Boardman Canal in the SE-1/4 of the NW-1/4 of Section 14, T.11N., R.7E., M.D.B.& M., and running thence northerly approximately 0.79 mile to its terminus in the SE-1/4 of the SW-1/4 of Section 11 of said Township and Range.

WEST PERRY EXTENSION NO. 1: Beginning at the Turner Canal in the SE-1/4 of the NW-1/4 of Section 14, T.11N., R.7E., M.D.B.& M., and running thence westerly and southerly approximately 0.5 mile to its terminus in the NE-1/4 of the SW-1/4 of said Section 14.

YANKEE HILL CANAL: Beginning at the Lower Boardman Canal in the NW-1/4 of the SW-1/4 of Section 14, T.11N., R.7E., M.D.B.& M., and running thence northerly approximately 0.74 mile to its terminus in the SW-1/4 of the NW-1/4 of said Section 14.

WEST PERRY EXTENSION NO. 2: Beginning at the Lower Boardman Canal in the NW-1/4 of the NW-1/4 of Section 23, T.11N., R.7E., M.D.B.& M., and running thence westerly and southwesterly approximately 0.25 mile to its terminus in the SE-1/4 of the NE-1/4 of Section 22 of said Township and Range.

BAUGHMAN CANAL: Beginning at the Lower Boardman Canal in the NE-1/4 of the SE-1/4 of Section 22, T.11N., R.7E., M.D.B.& M., and running thence southerly through said Section 22 and Sections 26 and 27, T.11N., R.7E., M.D.B.& M., approximately 1.90 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 27.

FERGUSON CANAL: Beginning at the Baughman Canal in the SE-1/4 of the SE-1/4 of Section 22, T.11N., R.7E., M.D.B.& M., and running thence easterly through said Section 22 and Sections 23 and 26, T.11N., R.7E., M.D.B.& M., approximately 0.64 mile to its terminus in the NE-1/4 of the NW-1/4 of said Section 26.

<u>STALLMAN CANAL:</u> Beginning at the Baughman Canal in the SW-1/4 of the SW-1/4 of Section 26, T.11N., R.7E., M.D.B.& M., and running thence southerly approximately 0.33 mile to its terminus in the SE-1/4 of the SW-1/4 of said Section 26.

<u>UPPER BANVARD CANAL:</u> Beginning at the Lower Boardman Canal in the SE-1/4 of the  $\overline{\text{NE}-1/4}$  of Section 21, T.12N., R.8E., M.D.B.& M., and running thence westerly approximately 1.19 miles to its terminus at the Lower Fiddler Green Canal in the SE-1/4 of the NE-1/4 of Section 20 of said Township and Range.

That portion of the <u>LOWER FIDDLER GREEN CANAL</u> (Upper Section) which begins at the Lower Fiddler Green-South Canal Bypass in the SE-1/4 of the NW-1/4 of Section 16, T.12N., R.8E., M.D.B.& M., and runs thence southwesterly approximately 2.09 miles to its terminus in the SE-1/4 of the NW-1/4 of Section 20 of said Township and Range.

MIDDLE BANVARD CANAL: Beginning at the Lower Fiddler Green Canal in the SW-1/4 of the NE-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., and running thence northerly and westerly approximately 0.39 mile to its terminus in the SE-1/4 of the NW-1/4 of said Section 20.

LOWER BANVARD CANAL: Beginning at the terminus of the Lower Fiddler Green Canal (Upper Section) in the SE-1/4 of the NW-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., and running thence westerly through Sections 20 and 19 of said Township and Range and Sections 24, 23, and 14, T.12N., R.7E., M.D.B.& M., approximately 2.82 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 14.

NEWCASTLE CANAL: Beginning at the Lower Boardman Canal in the SW-1/4 of the SE-1/4 of Section 20, T.12N., R.8E., M.D.B.& M., and running thence westerly and southerly through Sections 20, 19, and 30, T.12N., R.8E., M.D.B.& M., and through Sections 24 and 25, T.12N., R.7E., M.D.B.& M., approximately 3.31 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 25.

NORTH NEWCASTLE CANAL also known as TOWNE CANAL: Beginning at the Newcastle Canal in the NW-1/4 of the SW-1/4 of Section 19, T.12N., R.8E., M.D.B.& M., and running thence northwesterly approximately 0.5 mile to its terminus at the Newcastle Canal in the NE-1/4 of the SW-1/4 of said Section 19.

LOWER FIDDLER GREEN CANAL (Middle Section): Beginning at the Newcastle Canal in the NE-1/4 of the SW-1/4 of Section 19, T.12N., R.8E., M.D.B.& M., and running thence westerly approximately 0.71 mile to its terminus in the SE-1/4 of the NE-1/4 of Section 24, T.12N., R.7E., M.D.B.& M.

<u>DUTCH RAVINE CANAL:</u> Beginning at the downstream side of the delivery point gaging station in the SW-1/4 of the NE-1/4 of Section 19, T.12N., R.8E., M.D.B.& M., and running thence westerly approximately 0.89 mile to its terminus in the SW-1/4 of the NE-1/4 of Section 24, T.12N., R.7E., M.D.B.& M.

LOWER FIDDLER GREEN CANAL (Lower Section): Beginning in the SE-1/4 of the NE-1/4 of Section 24, T.12N., R.7E., M.D.B.& M., and running thence southwesterly approximately 1.15 miles to its terminus in the SE-1/4 of the SE-1/4 of Section 23 of said Township and Range.

RED RAVINE CANAL: Beginning at the Lower Boardman Canal in the SE-1/4 of the NW-1/4 of Section 30, T.12N., R.8E., M.D.B.& M., and running thence westerly and southerly through said Section 30 and through Sections 25, 36, 35 and 34, T.12N., R.7E., M.D.B.& M., and Section 3, T.11N., R.7E., M.D.B.& M., approximately 5.42 miles to its terminus at the Loomis Reservoir in the SE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M.

PENRYN CANAL: Beginning at the Antelope Canal in the SE-1/4 of the SE-1/4 of Section 23, T.12N., R.7E., M.D.B.& M., and running thence southerly through Sections 23, 26, 35 and 34 of said Township and Range approximately 3.01 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 34.

CAPERTON CANAL: Beginning at the terminus of the Lower Fiddler Green Canal (Lower Section) in the SE-1/4 of the SE-1/4 of Section 23, T.12N., R.7E., M.D.B.& M., and running thence westerly through Sections 23, 22, 21, 16, 20, 29, and 30 of said Township and Range approximately 9.72 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 30.

ANTELOPE CANAL: Beginning at the terminus of the Lower Fiddler Green Canal (Lower Section) in the SE-1/4 of the SE-1/4 of Section 23, T.12N., R.7E., M.D.B.& M., and running thence southwesterly through Sections 23, 22, 27, 28, 21, 29, and 32, said Township and Range and through Sections 5, 7, and 8, T.11N., R.7E., M.D.B.& M., approximately 7.77 miles to its terminus in the NW-1/4 of the SW-1/4 of said Section 8.

ANTELOPE STUB: Beginning at the Antelope Canal in the NE-1/4 of the SW-1/4 of Section 5, T.11N., R.7E., M.D.B.& M., and running thence southeasterly approximately 0.87 mile to its terminus in the SE-1/4 of the NE-1/4 of Section 8 of said Township and Range.

BEN FRANKLIN CANAL: Beginning at the Antelope Canal in the SE-1/4 of the NE-1/4 of Section 28, T.12N., R.7E., M.D.B.& M., and running thence southerly approximately 1.13 miles to its terminus in the NW-1/4 of the NE-1/4 of Section 33 of said Township and Range.

MORGAN PIPE AND CANAL: Beginning at the Antelope Canal in the SW-1/4 of the NW-1/4 of Section 27, T.12N., R.7E., M.D.B.& M., and running thence southerly through said Section 27 and Sections 34 and 33, T.12N., R.7E., M.D.B.& M., approximately 0.90 mile to its terminus in the NE-1/4 of the NE-1/4 of said Section 33.

WESTSIDE PIPELINE: Beginning at the Red Ravine Canal in the NE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M., and running thence southerly and westerly through said Section 3 and Sections 9 and 4, T.11N., R.7E., M.D.B.& M., approximately 1.76 miles to its terminus in the SE-1/4 of the SW-1/4 of said Section 4.

LOOMIS-ROCKLIN PIPELINE: Beginning at the Loomis Reservoir in the SE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M., and running thence southwesterly through said Section 3 and Sections 9, 10, 16, 17, 18, and 19, T.11N., R.7E., M.D.B.& M., approximately 3.96 miles to its terminus in the NE-1/4 of the NE-1/4 of said Section 19.

EASTSIDE CANAL: Beginning at the Loomis Reservoir in the SE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M., and running thence southerly through said Section 3 and Sections 9, 10, 16, and 17, T.11N., R.7E., M.D.B.& M., approximately 3.51 miles to its terminus in the SE-1/4 of the SE-1/4 of said Section 17.

<u>LYALL CANAL:</u> Beginning at the Loomis Reservoir in the SE-1/4 of the NW-1/4 of Section 3, T.11N., R.7E., M.D.B.& M., and running thence southerly approximately 0.93 mile to its terminus in the SE-1/4 of the SW-1/4 of said Section 3.

SOUTHERN PACIFIC PIPELINE: Beginning at the southwesterly terminus of the Boardman Canal in the SE-1/4 of Section 30, T.11N., R.7E., M.D.B.& M., and running thence southwesterly, approximately 0.87 mile to the easterly boundary line of the Southern Pacific reservoir in the NW-1/4 of Section 31, T.11N., R.7E., M.D.B.& M.

#### C - EASEMENTS FOR CANALS ACROSS P.G.& E. FEE LANDS

- 1. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Bypass Canal from the Upper Greeley Canal to the Lower Greeley Canal and extending from the southerly boundary line of that certain parcel of land acquired by Pacific by deed from Maud M. Cox and others dated April 6, 1920 and recorded in Book 177 of Deeds at page 283, records of Placer County, northerly approximately 250 feet, to the southerly terminus of the Upper Greeley Canal.
- 2. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Upper Greeley Canal and extending from the northerly boundary line of the parcel of land acquired by said deed dated April 6, 1920, southerly, approximately 100 feet to the northerly terminus of said existing Bypass Canal from the Upper Greeley Canal to the Lower Greeley Canal.
- 3. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Lower Greeley Canal and extending across those certain parcels of land acquired by Pacific by deeds from George D. Threlkel dated January 31, 1920 and recorded in Book 186 of Deeds at page 424, records of Placer County, and by deed from United Fruit Co. dated January 20, 1920 and recorded in Book 186 of Deeds at page 403, records of Placer County.
- 4. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Newcastle Canal extending across that certain parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, by deed from S. A. McCrary dated February 19, 1895 and recorded in Book 64 of Deeds at page 588, records of Placer County.
- 5. A strip of land of the uniform width of 20 feet lying equally on each side of the center line of the existing Lower Boardman Canal extending across said parcel of land acquired by said deed dated February 19, 1895.
- 6. A strip of land of the uniform width of 17 feet lying equally on each side of the center line of the existing Upper Greeley Canal extending across said parcel of land acquired by said deed dated February 19, 1895 and across that certain parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, by deed from Joseph S. McCrary dated May 18, 1906 and recorded in Book 96 of Deeds at page 122, records of Placer County.
- 7. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Red Ravine Canal and extending entirely across the parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, from James F. Dudley dated August 18, 1906 and recorded in Book 99 of Deeds at page 99, records of Placer County.
- 8. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Lower Boardman Canal and extending across the parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, by deed dated March 30, 1895 and recorded in Volume 66 of Deeds at page 59, records of Placer County.
- 9. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Caperton Canal extending across the parcel of land acquired by South Yuba Water Company, predecessor in interest of Pacific, from F. W. Cook and another by deed dated December 12, 1910 and recorded in Book 140 of Deeds at page 355, records of Placer County.

- 10. The strips of land occupied by the Lower Bowman Canal and Pipeline crossing Pacific's fee lands in Sections 13, 23, 24, 25, and 26, T.13N., R.8E., M.D.B.& M., more particularly described as follows:
  - a. A strip of land of the uniform width of 23 feet lying 8 feet on the left side and 15 feet on the right side of the center line of said canal and extending from the downstream side of the Parshall Measuring Well situate in the SE-1/4 of the SW-1/4 of said Section 13, southerly 700 feet more or less to the beginning of a section of the Lower Bowman Pipe.
  - b. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the existing Bowman Pipe which begins at the southerly terminus of the portion of the Bowman Canal described in 10a above and running thence southerly 900 feet more or less to the beginning of a section of the Lower Bowman Canal in the NE-1/4 of the NW-1/4 of said Section 24.
  - c. A strip of land of varying widths lying 7-1/2 feet on each side of the first 600 feet, 7-1/2 feet on the left side and 15 feet on the right side of the next 200 feet, and 7-1/2 feet on the left side and 25 feet on the right side of the remainder of the center line of the existing Lower Bowman Canal which begins at the southerly terminus of the portion of the Lower Bowman Pipe described in 10b above and runs thence westerly to the west line of Section 13, T.13N., R.8E.,M.D.B.& M.
  - d. A strip of land of the uniform width of 22-1/2 feet lying 7-1/2 feet on the left side and 15 feet on the right side of the center line of the existing Lower Bowman Canal which begins in the west line of the NW-1/4 of the NW-1/4 of Section 24, T.13N., R.8E., M.D.B.& M., and runs thence southerly 3,000 feet more or less to the Desilter Settling Tank situate in the NW-1/4 of the SW-1/4 of said Section 24.
  - e. A strip of land of the uniform width of 15 feet lying equally on each side of the center line of the portion of the existing Lower Bowman Pipe which begins at the Desilter Settling Tank in the NW-1/4 of the SW-1/4 of said Section 24 and runs thence southerly to the southerly boundary line of Pacific's fee lands in the NW-1/4 of said Section 25.
- 11. A parcel of land 50 feet by 70 feet (as now fenced) for use as a Desilter Settling Tank situate in the NW-1/4 of the SW-1/4 of Section 24, T.13N., R.8E., M.D.B.& M., together with the right to use Pacific's existing road for ingress to and egress from said parcel of land.
- 12. A strip of land of the uniform width of 20 feet lying equally on each side of the center line of the existing spillway which begins on the easterly boundary line of the parcel of land described in 11 above and runs thence southerly to Pacific's Halsey Afterbay in the NW-1/4 of the NW-1/4 of Section 25, T.13N., R.8E., M.D.B.& M.
- 13. A strip of land of the uniform width of 10 feet lying equally on each side of the center line of the existing spillway which begins on the westerly boundary line of the parcel of land described in 11 above and runs thence southerly to the 20' wide spillway described in 12 above.
- 14. A strip of land of the uniform width of 30 feet lying 10 feet on the easterly side and 20 feet on the westerly side of the center line of the existing Lower Boardman Canal crossing Pacific's lands in the W-1/2 of the W-1/2 of Section 19, T.13N., R.9E., M.D.B.& M.

#### D - OTHER PROPERTIES

RESERVOIR AND WATER TREATMENT PLANT: Situate in the N-1/2 of the S-1/2 of Section 19, T.12N., R.8E., M.D.B.& M., being the parcel of land described in the right of way to F. Birdsall, predecessor in interest of Pacific, from John Orr dated December 20, 1878, and recorded in Book E-Leases and Agreements at page 87, records of Placer County; and the parcel of land leased to Pacific from Southern Pacific Company dated January 13, 1949.

# **ZONE 3 CONTRACT**

## PURCHASE AGREEMENT

The parties to this Agreement are PACIFIC GAS AND ELECTRIC COMPANY, a corporation, whose offices are located at 77 Beale Street, San Francisco, Çalifornia, 94106, referred to hereafter as "PGandE," and PLACER COUNTY WATER AGENCY, a public agency organized under the Placer County Water Agency Act (Statutes of 1957, Ch. 1234, as amended -- West's Water Code Appendix, Ch. 81), hereafter referred to as "Buyer."

The business address for Buyer for purposes of this Agreement shall be P. O. Box 3218, Auburn, California, 95604.

#### RECITALS

PGandE is the owner of the Upper Placer Water System ("System") located in Placer County, California. Buyer wishes to purchase and operate this System and will assume PGandE's public utility obligations in connection with the System. The parties therefore agree as follows:

- 1. PURCHASE AND SALE. Buyer hereby agrees to purchase from PGandE and PGandE hereby agrees to sell to Buyer the Upper Placer Water System, hereafter referred to as "System," as follows:
- (a) The System, located in Placer County, California, as more particularly described in Exhibit A attached hereto and made a part hereof, including additions and betterments to the System up to the Closing Date.
- (b) The lands of PGandE relating to the System, commonly referred to as "System Fee Land," as described in Exhibit B attached hereto and made a part hereof.

- convenience and necessity, permits, licenses, contracts, easements, and similar rights and privileges ("permits and licenses") necessary for the operation of the System which are owned or possessed by PGandE on the Closing Date; provided, that permits and licenses which by statute cannot be transferred or the transfer of which is prohibited by the California Public Utilities Commission or other lawful authority, shall not be conveyed.
- (d) All System inventories of raw materials, chemicals, hydrants, supplies, finished products, work in process, meters, accessories and measuring equipment carried on the books of PGandE as of the Closing Date.
- (e) All water rights solely for consumptive use associated with the System, including (i) Lake Arthur, (ii) Lake Theodore, and (iii) Canyon Creek at the Pulp Mill Canal Diversion, exclusive of (1) the right to one cubic foot per second or the natural flow, whichever is less, which is hereby retained by PGandE for use in meeting its Drum-Spalding Project commitments and, (2) PGandE's direct and rediversion rights at the Towle Canal.
- (f) All deferred charges and prepaid expenses, a book value for which will be set forth in the balance sheet accounts of PGandE as of the Closing Date.
- (g) All System land improvements, storage tanks, treatment plants, buildings, wells, machinery and

equipment, miscellaneous tools, and construction work in progress owned by PGandE at the Closing Date (but not including the fish release outlet on the Pulp Mill Canal and the measurement weir below the Pulp Mill Diversion Dam), and recorded as of the Closing Date in the balance sheet accounts of PGandE, including any item thereof so recorded as fully depreciated on said date, and other similar items of tangible personal property owned by PGandE at the Closing Date, whether or not recorded in the balance sheet accounts of PGandE, including any item thereof so recorded as fully depreciated on said date.

- (h) The following automotive and construction equipment:
  - (1) Three (3) pickup trucks
  - (2) One (1) dump trailer
- Paragraph 8, the total purchase price for all of the assets set forth and described in Paragraph 1 above shall be FIVE HUNDRED TWELVE THOUSAND FIVE HUNDRED DOLLARS (\$512,500.00).

Agreement dated September 2, 1982 between PGandE as seller and Robert Ollendick as buyer, Buyer on September 28, 1982 deposited in an escrow account established for the purpose at First American Title Insurance Co., 500 Wall Street, P. O. Box 1146, Auburn, California 95603 ("purchase escrow"), a Bankers Acceptance Participation issued by the Bank of

California and payable jointly to PGandE and Buyer in the mount of FIFTY ONE THOUSAND TWO HUNDRED FIFTY DOLLARS

(\$51,250.00). A copy of said Bankers Acceptance Participation is annexed hereto as Exhibit D. Said Bankers Acceptance

Participation constitutes a deposit to be applied toward purchase of the System by Buyer. At least two business days prior to the Closing Date, Buyer shall deposit in the purchase escrow the balance of the purchase price in cash, which shall be paid to PGandE on the Closing Date. Failure of Buyer at any time to comply with the terms of this Paragraph 2 shall immediately excuse PGandE from further performance of its obligations under this Purchase Agreement.

- a Closing Date, which shall be within sixty days after the California Public Utilities Commission has given its final and unconditional approval to Buyer to purchase and operate the System pursuant to this Purchase Agreement. On the Closing Date, the escrow agent named in Paragraph 2 (a) shall deliver to Buyer quitclaim deeds and other documents of title relating to the real and personal property described in Paragraph 1, and (b) shall release to PGandE the total purchase price as described in Paragraph 2.
  - 4. ASSIGNMENT OF CONTRACT RIGHTS AND OBLIGATIONS.

    Prior to the Closing Date, PGandE shall deposit in the purchase escrow assignments to Buyer of all rights of PGandE as of the Closing Date arising out of all sales orders, sales contracts, purchase orders and purchase contracts

relating to the System. Buyer agrees to assume and perform all obligations arising out of said sales orders, sales contracts, purchase orders and purchase contracts which remain unperformed as of the Closing Date.

and hold Buyer harmless against any and all claims, debts, liabilities, obligations and causes of action involving sales orders, sales contracts, purchase orders or purchase contracts which have not been disclosed to Buyer prior to the Closing Date. PGandE shall, on Buyer's request, defend at its own expense any suit asserting a claim covered by this indemnity. Apart from the indemnity provisions of Paragraph 12, the foregoing undertaking constitutes PGandE's sole obligation to indemnify and hold Buyer harmless.

# 6. ACCOUNTS RECEIVABLE AND DEPOSITS.

- service furnished by PGandE prior to the Closing Date shall not be transferred with the System. Credit deposits for water service held by PGandE which provide security for payment of water bills shall be applied by PGandE to the closing bills for customer water service and any excess refunded to the customers. Buyer does not assume any liability for repayment to customers of such credit deposits.
- obligations of PGandE under all water main extension agreements relating to the System to which PGandE is a party as of the Closing Date, as shown on Exhibit C attached hereto and made a part hereof. Prior to the Closing Date, PGandE shall

deposit in the purchase escrow assignments to Buyer of all

'f PGandE's rights in said extension agreements. Promptly

After the Closing Date, PGandE shall ascertain and pay to

Buyer all sums of money deposited with and held by PGandE

pursuant to the provisions of said agreements. Buyer shall

make refunds when due to the holders of said extension

agreements in accordance with the refunding provisions of

such agreements. PGandE shall supply Buyer within sixty

(60) days after the Closing Date with an accounting of the

deposits under said agreements, including the amounts refunded,

the amounts remaining to be refunded, and the amounts of any

unexpended portion thereof. In no event shall Buyer's

financial obligation in regard to refunds to System customers

be greater than the deposit amounts transferred to Buyer by

PGandE.

the Closing Date, Buyer shall undertake the distribution of Water from the System. On the Closing Date, PGandE shall be relieved of all of its public utility obligations in connection with the System, and Buyer shall assume the same, including PGandE's obligations under all contracts, leases, permits, licenses, grants of rights of way, or other conveyances transferred pursuant to this Purchase Agreement. PGandE shall provide a complete list of such items to Buyer at least 30 days prior to the Closing Date.

# B. DELIVERY OF POSSESSION; DESTRUCTION OR DAMAGE TO PROPERTY PRIOR TO CLOSING.

on the Closing Date in an "as is" condition. PGandE shall continue to inspect, repair and maintain the System in its normal operating condition prior to the Closing Date, and shall complete without cost to Buyer any repairs PGandE has undertaken prior to the Closing Date. PGandE makes no warranties express or implied as to the condition of the System on the date of this Purchase Agreement or on the Closing Date.

In the event that PGandE and the Buyer determine prior to the Closing Date that capital improvements are necessary to expand the System to fulfill customer consumptive needs, and the cost of such capital improvements exceeds in the aggregate \$1,000.00, the cost of such capital improvements in excess of \$1,000.00 shall be added to the purchase price of the System set forth in paragraph 2.

If, on the Closing Date, the buildings, machinery, equipment, and other tangible property to be conveyed pursuant to this Purchase Agreement shall have suffered loss or damage on account of fire, flood, accident, act of war, civil commotion, or any other cause or event beyond the reasonable power and control of PGandE, to an extent which substantially affects the value of the property to be conveyed, Buyer shall have the right at its election either to complete or not complete the purchase. If Buyer

elects to complete the purchase, it shall be entitled to all nsurance proceeds in excess of amounts for which PGandE is self-insured collectible by reason of such loss or damage. If Buyer elects not to complete the purchase, Buyer shall have the right, which shall be in lieu of any other right or remedy of Buyer whatsoever, to terminate this Purchase Agreement, in which event all parties shall be released from liability hereunder. If such loss or damage does not substantially affect the value of such property, Buyer shall complete the purchase but shall be entitled to all insurance proceeds in excess of amounts for which PGandE is self-insured collectible by reason of such loss or damage. Loss or damage shall be considered to affect substantially the value of property within the meaning of this paragraph if the book value of the assets so lost or damaged exceeds ten (10%) percent in book value of all such assets.

# 9. PGande'S OBLIGATION TO SUPPLY WATER; PRICE OF WATER; WHEELING OF WATER.

PGandE will supply water needed for System consumptive use only (domestic, industrial, manufacturing and irrigation) up to a limit of 25,000 acre feet per year, at a maximum delivery rate of 38 cubic feet per second.

All deliveries of water by PGandE shall be made at Alta Tailrace and at the Alta Forebay, with deliveries at the Alta Forebay limited to those amounts necessary to meet the consumptive uses of the Alta Town System. From time to time PGandE shall, upon request of Buyer, change the rates

apacities of the delivery facilities for the purpose of meeting Buyer's requirements; provided that (1) any such request shall be made at least 24 hours in advance of the desired change, (2) no such change shall be made for less than 24 hours unless Buyer compensates PGandE for any increased costs PGandE may incur in making such change, and (3) PGandE shall not be required to make any such change on any legal holiday or during any non-work time of PGandE's ditch patrolmen unless Buyer compensates PGandE for any increased costs PGandE may incur in making such change.

No charge shall ever be made by PGandE for water delivered pursuant to this Paragraph until such deliveries exceed 13,000 acre feet in any water year. Buyer shall pay \$25.00 per acre foot for each acre foot of water delivered by PGandE in excess of 13,000 acre feet annually. When PGandE gives credit to Buyer as provided below for water returned, it shall be at the rate of \$14.65 per acre foot for each acre foot returned to and used by PGandE, as determined from PGandE operating and gauge records. The aforesaid prices of water shall take effect on the Closing Date and shall remain in effect for a period of 10 years thereafter. Beginning in the eleventh year after the Closing Date and annually thereafter, such prices shall be subject to adjustment in proportion to periodic changes in power values as established by the California Public Utilities Commission ("Commission") and paid to small power producers.

No credit shall be given for water returned to and used by PGandE unless and until PGandE's annual delivery of water under this Paragraph 9 exceeds 13,000 acre feet.

Credit for water returned to and used by PGandE shall be computed on a daily mean flow basis, and on no day shall the daily credit exceed the deliveries of water by PGandE to the System on such day. Credit will be given to Buyer for water used by PGandE which is returned to the Ragsdale Canal (i) from the Bowman Feeder Canal at a recording gauge to be installed by Buyer, and (ii) from Lake Theodore at PGandE's recording gauge YB-57. No credit shall be given to Buyer for water returned that has been diverted by Buyer to the System from Canyon Creek pursuant to the rights described in Paragraph 1(e).

In the event Buyer operates the System in such a manner as to conserve water and to decrease delivery requirements below 11,000 acre feet per year, PGandE will credit Buyer at the rate of \$25.00 per acre foot (or other value as adjusted by the Commission) for each acre foot of water less than 11,000 which is not delivered by PGandE.

At such time as PGandE utilizes the reach of Canyon Creek below the Towle Canal Diversion Dam for transportation of PGandE's water, PGandE shall measure the volumes of water delivered into and diverted from such reach of Canyon Creek.

For any amounts of water thus rediverted by PGandE at the Pulp Mill Canal in excess of the amount delivered by PGandE

to Canyon Creek below the Towle Canal Diversion Dam, PGandE will pay Buyer at the rate of \$25.00 per acre foot.

Buyer agrees to transport without cost to PGandE water for PGandE in the Lower Boardman Canal on a spaceavailable basis for delivery at the lower end of the Bowman Feeder Canal or below Lake Theodore during scheduled or emergency outages of the Bear River Canal. In the event PGandE desires to have Buyer transport water for PGandE as aforesaid, PGandE shall give notice of its request at least 24 hours before the time PGandE desires such transportation to take place. PGandE and Buyer agree to coordinate the operations of their respective systems so as to avoid periods when both the Bear River Canal and the Lower Boardman Canal are out of service at the same time. During periods when the Lower Boardman Canal is being used to deliver water for PGandE, PGandE shall, to account for its share of System losses, deliver into the System one hundred twenty-five per cent (125%) of the amount PGandE receives at the lower end of the System. Water transported by Buyer for redelivery to PGandE as provided herein shall not be included in the amount of water on which credits to Buyer are determined.

Buyer agrees that neither this Purchase Agreement nor anything done by PGandE hereunder, except solely those rights specified in this Purchase Agreement, shall be deemed to constitute a grant or dedication to Buyer of any water or land to which PGandE has vested rights, or to vest any right

or easement in Buyer whatsoever against PGandE other than as herein provided; nor shall any of the provisions of this Purchase Agreement be construed to deprive PGandE of any rights it has heretofore acquired.

Buyer agrees never to assert, and does bind its successors and assigns never to assert, a claim for water for use in the System under riparian or other right for consumptive purposes or otherwise against PGandE, its successors or assigns beyond that specified in this Paragraph 9, nor shall Buyer file with the California State Water Resources Control Board, its successor or any other state agency, any application to appropriate water for use in the System to which use PGandE is presently vested. Nothing in this Purchase Agreement shall be construed to prevent Buyer from filing or otherwise seeking the lawful appropriation of surplus water.

as provided in this Paragraph 9, but shall not be liable for curtailments of delivery caused by acts of God, labor disturbance, accident, fire, actions or decisions by any governmental agency, officer or court, or other conditions beyond PGandE's reasonable control. PGandE shall not be liable for curtailments of delivery that are necessary, in PGandE's sole judgment, reasonably exercised, to clean or repair canals or other facilities owned by PGandE upon which Buyer is dependent for its water supply, provided Buyer is given fourteen (14) days notice thereof.

# 10. PAYMENT FOR WATER: REMEDIES FOR FAILURE TO PAY.

On or before November 15 of each water year, PGandE shall bill Buyer for water delivered from October 1 to September 30 of the preceding water year, and shall credit Buyer in accordance with Paragraph 9 for water returned and water conserved by Buyer since October 1 of the preceding water year. Buyer shall pay each such bill (and PGandE shall pay Buyer in the event credits to Buyer exceed amounts owed by Buyer) within 60 days after the date of mailing of such bill. Failure of PGandE to bill Buyer as aforesaid shall not constitute a waiver of PGandE's right to payment for water under Paragraph 9, nor shall it excuse Buyer from paying any bill within 60 days after the date on which such bill is actually mailed. In the event Buyer fails to pay any bill within 60 days after it is mailed and does not invoke the bill dispute resolution procedures set forth below within 45 days after such bill is mailed, PGandE may without liability to Buyer, and without such action being deemed to constitute a waiver or election of remedies, curtail deliveries of water pursuant to Paragraph 9 to amounts necessary to serve the basic needs of Buyer's residential customers, and either party may request arbitration pursuant to the procedures set forth in Paragraph 11. Buyer agrees to indemnify and hold PGandE and its officers, agents and employees harmless against any and all claims, debts, liabilities or causes of action based upon or arising

out of said curtailments of water deliveries, and to defend at Buyer's expense any suit brought on account thereof.

In the event of a billing dispute between Buyer and PGandE, Buyer shall be entitled, upon giving written notice delivered to PGandE within 45 days after mailing of the bill, (1) to inspect PGandE's metering and billing records for the System, and (2) to demand that any one or more facilities for recording water deliveries ("metering facility") be tested. If a metering facility is found upon testing to be overreading by more than 5%, PGandE shall credit Buyer for the overcharge based on the corrected meter readings for the period in which the meter was in use, not to exceed six months, unless it can be conclusively established that the error was due to some cause, the date of which can be fixed. In such case the overcharge shall be computed back to but not beyond such time. If a metering facility is found upon testing to be underreading by more than 5%, PGandE may render to Buyer a bill for water consumed but not billed for a period of up to six months, or a lesser time if the actual period of error can be determined with certainty. In the event that inspection of records and testing of metering facilities as aforesaid does not resolve the billing dispute, the matter shall be settled by arbitration. In such event, Buyer shall pay to PGandE the portion of the bill not in dispute, and shall deposit the disputed amount with the arbitrators appointed pursuant to the procedures set forth in Paragraph 11.

## 11. ARBITRATION.

In the event that (1) deliveries of water are curtailed because of failure by Buyer to pay a bill rendered pursuant to Paragraph 10, or (2) a billing dispute between the parties cannot be settled by means of the bill dispute resolution procedures set forth in Paragraph 10, either party to this Purchase Agreement may request arbitration of such issue by giving written notice of such request to the other party. Each of the parties shall, within 30 days after giving or receiving such written notice, appoint one arbitrator. If either party fails to appoint an arbitrator within such time, such arbitrator shall be appointed by a Superior Court of the State of California in accordance with the California Code of Civil Procedure. At any time that either arbitrator concludes that agreement between the two arbitrators thus appointed cannot be reached, the two arbitrators shall appoint a third arbitrator or, if they cannot agree upon a third arbitrator, such third arbitrator shall be appointed by said Superior Court in accordance with said Code. A decision by two of the arbitrators shall be binding on the parties. If a decision cannot be reached within 90 days after appointment of the third arbitrator, on written notice by either party to the other, the arbitrators' authority shall terminate and either party may submit the matter to an appropriate court for decision. Each party shall bear the expenses and fees of the arbitrator appointed by it and its own expenses in the arbitration. The expenses and fees of the third arbitrator

and all other expenses of arbitration shall be borne equally by PGandE and Buyer.

### 12. OPERATION AND MAINTENANCE.

After the Closing Date, Buyer shall provide at its expense any conduits, ditches, pipelines, storage tanks, distribution mains, or other facilities necessary for receiving, pumping, treating, storing, conveying, or distributing water beyond the delivery points specified in Paragraph 9, and shall be solely responsible for the effective operation, maintenance and replacement of the System.

Buyer acknowledges that the water PGandE will deliver pursuant to Paragraph 9 is untreated water, which PGandE considers unpotable.

Buyer agrees to maintain in force for a period of 10 years from the Closing Date, a policy of liability insurance in a face amount not less than \$1,000,000, which policy shall be in a form and from a carrier acceptable to PGandE and which shall designate PGandE as an additional insured. Buyer shall pay all premiums due on said policy. In the event that a judgment for an amount greater than \$1,000,000 is rendered by a court of competent jurisdiction within 10 years after the Closing Date finding Buyer liable for death or injury to persons or property on account of Buyer's operation and maintenance of the System, and such judgment is based upon a finding that such death or injury was proximately caused by the negligence or misconduct of PGandE in operating or maintaining the System prior to the

Closing Date, PGandE shall indemnify and hold Buyer harmless against the amount of such judgment in excess of \$1,000,000.

#### 13. RECORDS/ASSISTANCE.

Prior to Closing Date, PGandE shall, without cost to Buyer, cooperate in the training of personnel to be selected and paid by Buyer. PGandE's obligation to assist in such training shall not exceed 30 days. PGandE shall supply at Closing Date guideline instructions covering operation, maintenance and administration of the System. Buyer agrees that the personnel selected for training shall remain with and be under the supervision of PGandE employees at all times, and that PGandE shall not be responsible for the conduct or safety of such personnel. Buyer agrees to indemnify and to hold PGandE and its officers, agents and employees harmless against any and all claims, debts, liabilities or causes of action based upon guideline instructions or training furnished by PGandE pursuant to this paragraph, or involving death or injury to persons or property arising out of any act of personnel selected by Buyer for training pursuant to this paragraph. Buyer agrees to defend upon PGandE's request any suit asserting a claim covered by the foregoing indemnity. Buyer waives and releases PGandE from any and all claims, debts, liabilities or causes of action that Buyer may hereafter have arising out of or based upon guideline instructions or training furnished by PGandE pursuant to this paragraph. PGandE shall make available to

Buyer information and records relating to the operation, maintenance and administration of the System.

# 14. CONVEYANCE OF THE SYSTEM.

Within a reasonable period after execution of this Purchase Agreement, PGandE and Buyer shall jointly file with the California Public Utilities Commission ("Commission") an application for an order authorizing PGandE and Buyer to carry out the terms of this Purchase Agreement without condition. PGandE and Buyer shall prosecute such application with reasonable diligence; provided, however, that if the Commission or any member of its staff asserts that the application is deficient in any respect, and such deficiency cannot, with reasonable effort, be cured within 90 days after notice thereof, PGandE may unilaterally terminate the application, in which case each party shall be excused from further performance of its respective obligations under this Purchase Agreement and the deposit paid pursuant to Paragraph 2 shall be returned to Buyer. In no event shall PGandE incur any liability to Buyer if the Commission fails to grant the order requested in such application.

has approved without condition the sale of the System to
Buyer pursuant to the terms of this Purchase Agreement,
PGandE shall furnish Buyer with evidence of title to the
System. Buyer shall have ten (10) working days within which
to inspect said evidence of title and to inform PGandE
whether the same is satisfactory to Buyer. In the event

foresaid evidence of title is unsatisfactory, each party shall be excused from further performance of its respective obligations under this Purchase Agreement, and the deposit paid pursuant to Paragraph 2 shall be returned to Buyer. In the event Buyer does not inform PGandE as aforesaid that title to the System is unsatisfactory, PGandE shall deposit in the purchase escrow for conveyance to Buyer (1) a quitclaim deed as to fee lands subject to:

- (a) the lien of current real property taxes not delinquent;
- (b) the lien of PGandE's First and Refunding Mortgage;
- (c) easements for existing PGandE transmission . and distribution facilities for electricity, gas, telephone or water, if any;
- (d) all valid and existing contracts, leases, licenses, easements, encumbrances, and claims of title whether recorded or not;
- (e) non-exclusive rights of way on any existing roads for access to PGandE's facilities,

and (2) an assignment of all rights of way and easements for the canals and ditches. After the Closing Date, PGandE will immediately take all steps necessary to secure release of the real property of the System from the First and Refunding Mortgage. PGandE shall be entitled to reserve without charge in the quitclaim deed to be provided to Buyer (i)
easements necessary for the installation and reading of
meters used to determine the amount of water delivered
pursuant to Paragraph 9, (ii) non-exclusive easements for
existing PGandE transmission and distribution facilities for
electricity, gas, telephone or water, if any, and (iii)
easements necessary for access to the existing fish release
outlet on the Pulp Mill Canal and the measurement weir below
the Pulp Mill Diversion Dam.

#### 15. DEFENSE AGAINST SUIT.

In the event any action or proceeding seeking to prohibit sale of the System pursuant to this Purchase Agreement is brought before the Commission or in a court of competent jurisdiction, each party shall bear its own attorneys fees, court costs, and other expenses in defending said action.

- assessments encumbering the System shall be prorated between PGandE and Buyer as of the Closing Date. PGandE shall pay for documentary transfer taxes or other taxes with respect to property transferred by it. Recording costs shall be paid by Buyer. Title insurance premiums on the System, if any, shall be paid by Buyer. Fees to the escrow holder identified in paragraph 2, if any, shall be paid by Buyer.
- 17. FAILURE TO OBTAIN COMMISSION APPROVAL. In the event that the Commission declines, after application made pursuant to paragraph 14 and a hearing, to approve

without condition the sale of the System pursuant to the terms of this Purchase Agreement, each party shall be excused from performance of its respective obligations hereunder and the deposit paid pursuant to Paragraph 2 shall be returned to Buyer. In the event that the application made pursuant to Paragraph 14 is withdrawn at Buyer's request prior to hearing thereon by the Commission, or that Buyer refuses to complete the purchase after approval without condition of this Purchase Agreement by the Commission, the deposit described in Paragraph 2 shall be paid to PGandE as liquidated damages pursuant to section 1671 (b) of the California Civil Code.

- 18. <u>PERMITS</u>. After the Closing Date, Buyer shall promptly obtain all necessary permits required for the sale and distribution of water from the System.
- destruction to any and all of the System properties shall be upon PGandE at all times prior to the Closing Date. On and after the Closing Date, all risk of loss or injury or destruction to any and all such properties shall be upon the Buyer.
- Agreement constitutes the entire agreement of the parties, which may be modified only upon mutual written consent.
- 21. NO REPRESENTATIONS BY PGandE: RELEASE. In the negotiation of this Purchase Agreement, PGandE has not furnished any legal, tax, engineering or other professional advice to Buyer or its authorized agents or attorneys.

Buyer acknowledges that it has not relied upon any representations other than those set forth herein in deciding to enter into this Purchase Agreement, and Buyer expressly waives and releases PGandE and its officers, agents and employees from any and all claims, debts, liabilities or causes of action based upon or arising out of alleged misrepresentations or failure to disclose material facts in the negotiation of this Purchase Agreement.

- 22. CAPTIONS AND PARAGRAPH HEADINGS. Captions and paragraph headings used herein are for convenience only and are not a part of this Purchase Agreement and shall not be used in construing it.
- given this Purchase Agreement by Buyer shall be given to PGandE's Drum Division Manager at PGandE's office in the City of Auburn, or to such other agents or representatives

of PGandE as PGandE or its said Division Manager may from time to time designate in writing. Notices required or allowed to be given under this Purchase Agreement by PGandE shall be given to Buyer's General Manager at Buyer's office in the City of Auburn, or to such other agents or representatives of Buyer as Buyer or its General Manager may from time to time designate in writing.

DATED this 17th day of November, 1982.

IN WITNESS WHEREOF, the parties hereto have subscribed this contract by their officers thereunto duly authorized.

PLACER COUNTY WATER AGENCY

By Chairman of the Board of Directors

By - I Clerk of the Board of Directors

PACIFIC GAS AND ELECTRIC COMPANY

-Xalliller

and

By Secretary

#### EXHIBIT A

### DESCRIPTION OF UPPER PLACER WATER SYSTEM

The water treatment plants and distribution systems providing treated water service to the Alta, Colfax and Monte Vista areas. The canals and reservoirs are as follows:

- Lower Boardman Canal from Alta powerhouse tailrace to Lake Arthur
- 2. Pulp Mill Canal
- 3. Bowman Feeder Canal
- 4. Lake Alta
- 5. Lake Arthur
- 6. Lake Theodore

### Parties have agreed:

- \* Ragsdale Random Canal & Tunnel
- · Lower & Middle Fiddler Green Canals
- \* Upper Bowman Canal

are to be retained by the Company.

## EXHIBIT B

# UPPER PLACER WATER SYSTEM

# Fee Land

Map Number	Title	Acres
135-31-4-7	Colfax Filtration Plant	.997
135-31-14-1	Lake Alta Floodage Rights	25.000
<b>-35-31-15-1</b>	Monte Vista Treatment Plant Building and Equipment	.030
135-31-15-2	Boardman Canal	.060
135-31-34-5&6	Colfax Water Lot and Storage Tank	1.301
`5-31-58-3	Colfax Air Release Basin	.290
5-31-73D, ccel 10	Boardman Canal	.800
135-31-73D. Parcel 13	Lake Arthur Reservoir	48.600
135-31-73D. arcel 14	Lake Arthur Reservoir	.460
135-31-73D, Parcel 15	Lake Theodore Reservoir	14.70
135-31-73D. Parcel 16	Lake Theodore	75.924
135-31-74	Monte Vista Water System (Well)	
	Total Acres	168.382

## EXHIBIT C

## Main Line Extension Contracts

Name	MLX No.	Refundable Belance*
Carrillo	HF 2027	1,923.76
Aiello Construction Co.	HF 2216	21,280.08

\*Subject to further refund by PGandE

E" jeer County Water Agaiey

Thuson Rd. 9 P. O. Box 3218 • Auburn. Celifornia 95604

· A Public Agency

BEJARI) EH IMRECTEURS

B. G. Rinds • Imagent Farinha

Edwin Kosser • J. K. Norman

• E. W. Horton

B. G. Grans, General Manager

October 1, 1982 File No. 411-4

Ms. Kay Reynolds
FIRST AMERICAN TITLE INSURANCE COMPANY
P.O. Box 1146
Auburn, CA 95603

RE: Escrow No. 79281-K - Purchase PG&E Upper Water System
Dear Ms. Reynolds:

Following up on my letter of September 28, 1982, enclosed is the typed, permanent Banker's Acceptance Receipt No. 063796 issued to Placer County Water Agency and Pacific Gas and Electric Company. Please hold this in trust as previously requested.

Yours truly,

PLACER COUNTY WATER AGENCY
Original
Stoned by

B. G. Grant General Manager

BGG:kfc

Enclosure: Banker's Acceptance Receipt No. 063796

cc: .Robert Metzker, PGiZ w/enclosure

SANIKGALE FOR 45000  San Francisco, Ca 94145  San Francisco, Ca 94145	10.20 10.20
--	---

Figure Water Agency

185 . \_\_auson Rd. • P. O. Box 3218 • Auburn, California 95604 (916) 885-2411

- A Public Agency -

BOARD OF BIRECTORS
B. G. Rinks © Junquin Farinka
Edwin Komer © J. K. Norman
B. W. Norman
B. G. Grant, General Manager

September 28, 1982 Pile No. 301-8

First American Title Insurance Company P.O. Box 1146 Auburn, CA 95603

RE: Escrow - PG&E and PCWA Purchase Agreement

wentlemen:

·. :

PG&E has agreed to sell its Upper Placer Water System to PCWA, and an escrow account is to be established with First American Title Insurance Company for that purpose.

Enclosed you will find a receipt for a Banker's Acceptance Participaon issued to PG4E and PCWA by the Bank of California. This has a esent value of \$51,250 and a six month maturity value of \$53,990.

as represents the initial deposit from PCWA and the full value upon maturity will be applied to the total purchase price to be paid by PCWA to PG&E for the Upper Placer Water System. In the event that the sale is not consummated, the full value will be returned to PCWA.

Please hold this in trust with the other documents required under the scrow account, which will be established in the very near future. Please acknowledge receipt of this document.

Yours truly,

PLACER COUNTY WATER AGENCY

B. G. Grant General Manager

BGG:kfc Enclosure

Receipt is acknowledged of the Banker's Acceptance receipt as noted above:

FIRST AMERICAN TITLE INSURANCE COMPANY

y ky kyneis

1220 Crespent heritage

Date Sup. 25, 1912

Page 363 of 534

eren - 79251-R

CUSTOMER COPT	THE BANK OF	CALIFORNIA	No. 106697
Y DE POLICIENS MICHETIAL	Outrem 15	ema e	9-27-82
My min \$ 151.2	50.00 in foreign la	In exceptance du	1-21-83 210.5%
D. John Homes	Park	_ar	ecco with Carcillo
Becinyly	TEUCTIONS		White agency AND
NE E _017-015	792	- Par Par Das	
PCWA/PGE			Online CA SCOU
			2 2
THE RESERVE AND ASSESSMENT ASSESS	ISSIONS, BEBATES OR DISCOUNTS DECEI	VED PROM SHOKEES OR SEALERS.	lili
[Ro-A-68]		\$ 003	2
	₩		

This Banker's Acceptance receipt no. 106697 is a temporary receipt pending receipt of a typed, permanent copy by the Bank of California. The permanent copy is in the mail and should be received in the next day or so. The Bank of California, San Francisco, in the next day or so. The Bank of California, San Francisco, will werify the issuance of this receipt werbally through Delores Smith at (415) 765-2858.

Signed:

B. G. Grant, General Manager PLACER COUNTY WATER AGENCY

September 28, 1982

Appendix D-3	Western Placer County Groundwater Management Plan	
Placer County Water	Agency	









# WESTERN PLACER COUNTY GROUNDWATER **MANAGEMENT PLAN**







# **Table of Contents**

SECT	10N 1.0	INTRODUCTION				
1.1	REPOR	RT ORGANIZATION				
1.2	PURPO	OSE AND GOALS OF THE WPCGMP				
1.3	BACK	GROUND				
	1.3.1	Roseville				
	1.3.2	Lincoln				
	1.3.3	PCWA				
	1.3.4	CAW				
	1.3.5	Other Adjacent Entities				
1.4	EXISTI	EXISTING GMPS				
	1.4.1	Western Placer (1998 and 2003 update)				
	1.4.2	Lincoln's GMP (2003)				
	1.4.3	SGA (2003)				
	1.4.4	SSWD (1993)				
	1.4.5	NCMWC (2000)				
1.5	OTHER	R MANAGEMENT EFFORTS				
	1.5.1	Roseville				
	1.5.2	Lincoln				
	1.5.3	PCWA				
	1.5.4	CAW				
	1.5.5	Regional				
1.6		DRITY TO PREPARE AND IMPLEMENT A WPCGMP				
1.7	WPCG	MP COMPONENTS				
SECT	10N 2.0	WATER RESOURCES SETTING				
2.1	GROUI	NDWATER CONDITIONS				
	2.1.1	Groundwater Basin				
	2.1.2	Geology/Hydrogeology				
	2.1.3	Hydrostratigraphy				
	2.1.4	Groundwater Quality				
2.2	SURFA	CE WATER CONDITIONS				
2.3	SURFA	CE WATER QUALITY				
2.4	WATER	R USE				
	2.3.1	Roseville				
	2.3.2	Lincoln				
	2.3.3	PCWA				
	234	CAW 2-21				

SECT	10N 3.0	MANAGEMENT PLAN ELEMENTS	3-1
3.1	GROUI	NDWATER MANAGEMENT GOAL	3-7
3.2	MAKE	UP 0F A BMO	3-1
3.3	BASIN	I MANAGEMENT OBJECTIVES	3-2
	3.3.1	BMO #1 — Management of the groundwater basin shall not have a significant adverse affect on groundwater quality	3-2
	3.3.2	BMO #2 – Manage Groundwater Elevations to ensure an adequate groundwater supply for backup, emergency, and peak demands without adversely impacting adjacent areas.	3-3
	3.3.3	BMO #3 - Participate in State and Federal Land Surface Subsidence Monitoring Programs	
	3.3.4	BMO #4 - Protect Against Adverse Impacts to Surface Water Flows in Creeks and Rivers due to groundwater pumping.	3-3
	3.3.5	BMO #5 — Ensure Groundwater Recharge Projects Comply with State and Federal Regulations and protect beneficial uses of groundwater.	3-4
3.4	WPCG	MP COMPONENTS	3-4
3.5	COMP	ONENT CATEGORY 1: STAKEHOLDER INVOLVEMENT (REQUIRED)	3-4
	3.5.1	Involving the Public	3-4
	3.5.2	Involving Other Agencies Within and Adjacent to the WPCGMP Area	3-5
	3.5.3	Utilizing Advisory Committees	3-7
	3.5.4	Developing Relationships with State and Federal Agencies	<i>3-7</i>
	3.5.5	Pursuing Partnership Opportunities	3-7
3.6	COMP	ONENT CATEGORY 2: MONITORING PROGRAM (REQUIRED)	3-8
	3.6.1	Groundwater Elevation Monitoring.	3-8
	3.6.2	Groundwater Quality Monitoring	3-8
	3.6.3	Land Surface Elevation Monitoring	3-10
	3.6.4	Surface Water Groundwater Interaction Monitoring	3-11
	3.6.5	Protocols for the Collection of Groundwater Data	3-11
	3.6.6	Groundwater Data Management System	3-12
3.7	COMP	ONENT CATEGORY 3: GROUNDWATER RESOURCE PROTECTION	
	3.7.1	Well Construction Policies	3-12
	3.7.2	Well Abandonment and Well Destruction Policies	3-14
	3.7.3	Wellhead Protection Measures	3-14
	3.7.4	Protection of Recharge Areas	3-15
	3.7.5	Control of the Migration and Remediation of Contaminated Groundwater.	3-16
	3.7.6	Control of Saline Water Intrusion	3-16
3.8	COMP	ONENT CATEGORY 4: GROUNDWATER SUSTAINABILITY	3-17
	3.8.1	Conjunctive Management Activities	3-17
	3.8.2	Demand Reduction	3-17
3.9	COMP	ONENT CATEGORY 5: PLANNING INTEGRATION	3-18
	3.9.1	Existing Integrated Planning Efforts	3-18
	3.9.2	Potential Future Integrated Planning Efforts	3-20
3.10	SUMN	MARY OF SECTION 3	3-21

SECTION 4.0 PLAN IMPLEMENTATION       4-1         4.1 BIENNIAL GMP IMPLEMENTATION REPORT       4-1         4.2 FUTURE REVIEW OF WPCGMP       4-1         4.3 FINANCING       4-2         SECTION 5.0 REFERENCES       5-1
List of Figures
FIGURE 1-1 — WPCGMP AREA.  FIGURE 1-2 — SERVICE AREA/CITY LIMITS OF WPCGMP PARTICIPANTS  FIGURE 1-3 — ADJACENT ENTITY SERVICE AREAS  FIGURE 2-1 — NORTH AMERICAN GROUNDWATER SUBBASIN AND WPCGMP AREA  FIGURE 2-2 — GEOLOGY OF REGION  2-5  FIGURE 2-3 — STRATIGRAPHIC PROFILE  FIGURE 2-4 — GROUNDWATER ELEVATION MAP.  FIGURE 2-5 — GROUNDWATER ELEVATION HYDROGRAPHS  2-9  FIGURE 2-6 — PRINCIPLE CONTAMINATION SITES  FIGURE 2-7 — PROJECTED WATER DEMANDS  FIGURE 2-8 — EXISTING ROSEVILLE/LINCOLN/PCWA/CAW FACILITIES  FIGURE 3-1 — ORGANIZATION OF MANAGEMENT PLAN ELEMENTS  FIGURE 3-2 — ADJACENT AGENCY SERVICE AREAS  FIGURE 3-3 — DWR, USGS, ROSEVILLE AND LINCOLN WELLS  FIGURE 3-4 — RECOMMENDED SUSTAINABLE YIELD FOR THE NORTH AMERICAN GROUNDWATER SUB-BASIN  3-17
List of Tables
TABLE 1-1. PCWA RETAIL SERVICE ZONES

# **Appendices**

APPENDIX A	WPCGMP PARTICIPANTS' PUBLIC NOTICES	APPENDIX A
APPENDIX B	WPCGMP PUBLIC OUTREACH PLAN	APPENDIX B
APPENDIX C	STANDARD OPERATION PROCEDURES FOR GROUNDWATER ELEVATION MONITORING	APPENDIX C
APPENDIX D	AGENCIES - RESOLUTIONS OF ADOPTION	APPENDIX D

# **Abbreviations and Acronyms**

AB Assembly Bill

AEG Applied Engineering and Geology

AF acre-feet

AFB Air Force Base

ARB American River Basin

ARPS American River Pump Station

ARWRI American River Water Resources Investigation

ASR Aquifer Storage and Recovery
BMO Basin Management Objective

CAW California American Water Company

cfs cubic-feet per second

CGS California Geological Survey

COC constituents of concern

CPS Comprehensive Planning Study

CVP Central Valley Project

CVRWQCB Central Valley Regional Water Quality Control Board

DCW Diamond Creek Well

DHS Department of Health Services

DMS Data Management System

DTSC Department of Toxic Substances Control

DU dwelling units

DWR California Department of Water Resources

DWSAP Drinking Water Source Assessment and Protection

EMD Environmental Management Department

EPA Environmental Protection Agency
FRWA Freeport Regional Water Authority

GAMA National Groundwater Ambient Monitoring Assessment

GMP Groundwater Management Plan

gpd/ft gallons per day per foot gpm gallons per minute

GPS Global Positioning System

IRWMP Integrated Regional Water Management Plan

IWRP Integrated Water Resources Plan

JPA joint powers authority

Lincoln City of Lincoln

LSCE Luhdorff & Scalmanini Consulting Engineers

LUSTs leaking underground storage tanks

M&I Municipal and industrial

MCL Maximum Contaminant Level

MFP Middle Fork Project

MOU memorandum of understanding

NARIGSM North American River Integrated Groundwater Surface Water Model

NCMWC Natomas Central Mutual Water Company

NGS National Geodetic Survey
NID Nevada Irrigation District

PBE Physical Barrier Effectiveness

PCAs Potential Contaminating Activities

PCE tetrachloroethene

PCWA Placer County Water Agency

PG&E Pacific Gas and Electric

PNWA Placer Nevada Wastewater Authority

RAP Remedial Action Plan
Roseville City of Roseville

ROWD Report of Waste Discharge
RWA Regional Water Authority

SB Senate Bill

SCEP Strategic Capital Expenditure Plan
SCWA Sacramento County Water Agency
SGA Sacramento Groundwater Authority

SJWD San Juan Water District
SKS Saracino, Kirby, and Snow

SMWA Sacramento Metropolitan Water Authority

SOI sphere of influence

SOP Standard Operating Procedure
SSWD South Sutter Water District

Sub-Basin North American River Groundwater Sub-Basin

trihalomethane

Successor Effort Water Forum Successor Effort
SVOCs semi-volatile organic compounds
SWRCB State Water Resources Control Board

TCE trichloroethylene

TDS total dissolved solids

THM

TPH total petroleum hydrocarbons
TRC Technical Review Committee
USGS United States Geological Survey
UWMP Urban Water Management Plan
VOCs volatile organic compounds

WF Water Forum

WFA Water Forum Agreement

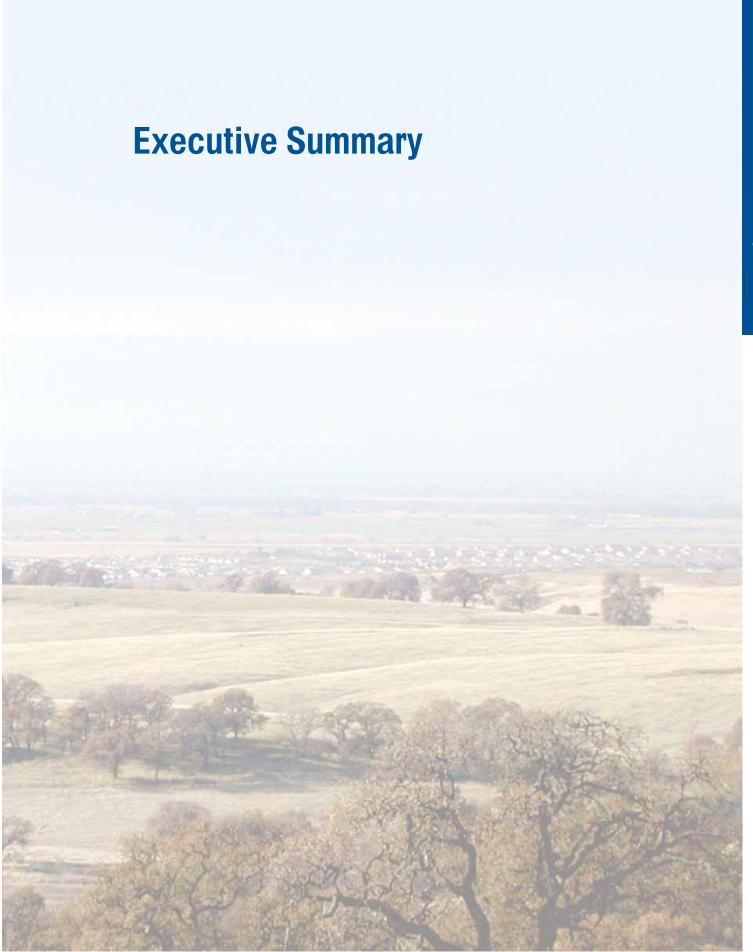
WPCGMP Western Placer County Groundwater Management Plan
WPWMALS Western Placer Waste Management Authority Landfill Site

WSIP Water Systems Infrastructure Plan

WTP Water Treatment Plant

WWTP Wastewater Treatment Plant

WWTRF Wastewater Treatment and Recycling Facility



#### THE WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

# **Executive Summary**

#### **OVERVIEW**

The Western Placer County Groundwater Management Plan (WPCGMP) is a planning tool to assist the City of Roseville, the City of Lincoln, Placer County Water Agency (PCWA), and the California American Water Company (CAW) in an effort to maintain a safe, sustainable and high-quality groundwater resource within a zone of the North American River Groundwater Sub-basin (Sub-basin). These plan participants have identified a range of specific goals, objectives, and actions that collectively provide a "road map" for future implementation of the WPCGMP by a governing

body. As a "living document," the WPCGMP is intended to be periodically updated and refined to reflect progress made in achieving the WPCGMP's objectives and as conditions change in the region. The document outlines a series of required, recommended, and voluntary actions that will promote on-going modification of the WPCGMP's depth and content.

Lastly, a Groundwater Management Plan (GMP) is a required "baseline" document for agencies seeking grant funds from the State of California. Moreover, state agencies that award grants on a competitive basis often



give preference to GMPs that have been adopted and implemented by multiple agencies.

#### WPCGMP GOAL AND PURPOSE

The goal of the WPCGMP is to maintain the quality and ensure the long-term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGMP area. To meet that goal, the purpose of this WPCGMP is to serve as the initial framework for coordinating the many independent management activities into a cohesive set of management objectives and related actions necessary to meet those objectives.

#### **GMP REQUIREMENTS**

The California Groundwater Management Act and Assembly Bill 3030 and Senate Bill 1938 guide the preparation of GMPs and contain numerous technical requirements and provisions which are briefly summarized as follows:

- A GMP contains an inventory of water supplies and describes water uses with a given region.
- A GMP establishes groundwater Basin Management Objectives (BMOs) that are designed to protect and enhance the groundwater basin.
- A GMP identifies monitoring and management programs that ensure the BMOs are being met.
- The GMP outlines a stakeholder involvement and public information plan for the groundwater basin.



#### WHY PREPARE THE WPCGMP?

The WPCGMP is being prepared primarily to position basin partners for future groundwater planning activities. These activities are summarized as follows:

- A GMP develops a framework or baseline on which to build future planning efforts.
- Preparing a GMP is a good planning procedure for managing a groundwater basin.
- A GMP is a prerequisite in applying for State grant funding opportunities.

#### **WPCGMP PARTNERS**

The preparation of the WPCGMP is a joint effort by the Cities of Roseville and Lincoln, PCWA, and CAW. Placer County has been an active participant in the GMP's development; however, the County has not formally joined the WPCGMP as a full partner. In addition, the California Department of Water Resources (DWR) has been an active participant in development of the WPCGMP. Through adoption of the WPCGMP, these plan participants are building upon previous groundwater management efforts in the basin.

#### STAKEHOLDER INVOLVEMENT

Plan participants have conducted a series of briefings and public meetings to inform and involve stakeholders in the WPCGMP. Stakeholder groups briefed on the WPCGMP were: Roseville Public Utility Commission; Lincoln City Council; Placer County Water Agency Board of Directors; Sacramento Groundwater Authority and its member agencies; and the Water and Environment Caucuses of the Water Forum.



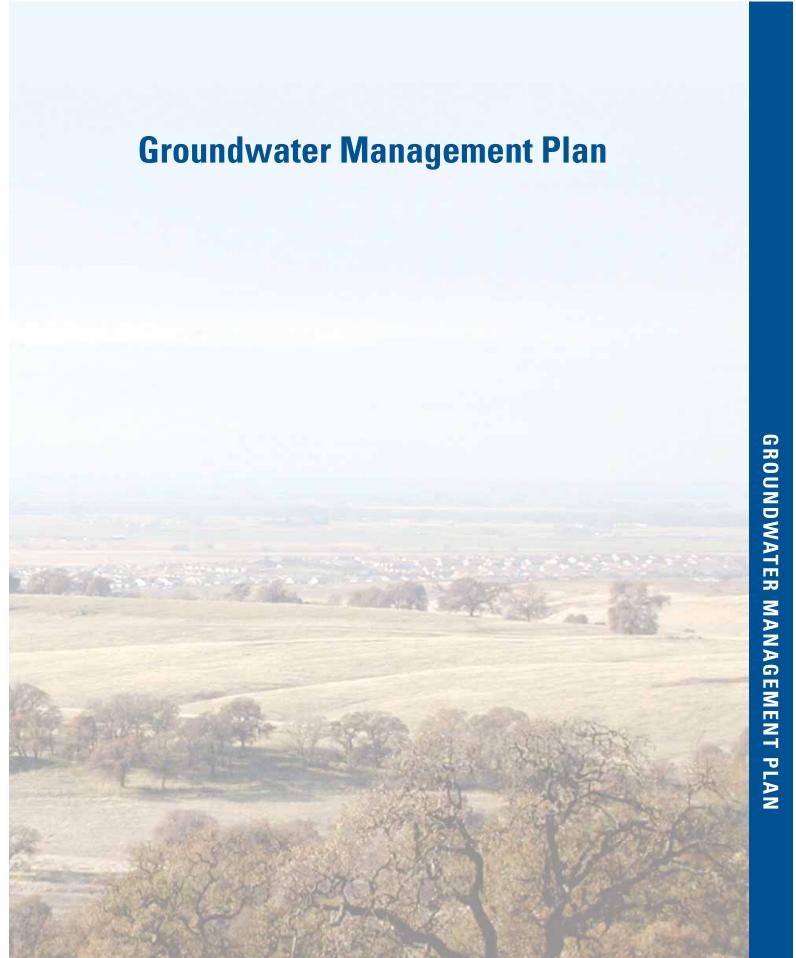


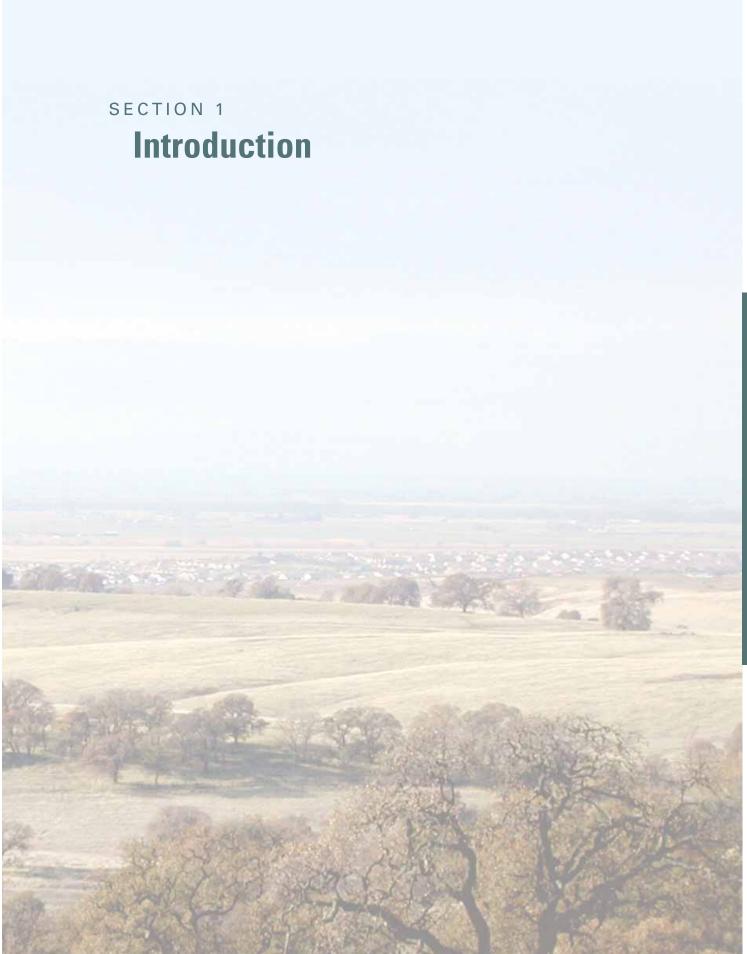
Plan participants have provided presentations and/or informational materials to adjacent agencies and organizations including the South Sutter Water District, Natomas Central Mutual Water Company, Nevada Irrigation District, San Juan Water District, City of Rocklin, City of Citrus Heights, Rio Linda/Elverta Community Water District, Yuba County Water Agency, Sacramento Suburban Water District, and Camp Far West Water District.

A public open house to present elements and objectives of the WPCGMP was held June 14, 2007, at the City of Lincoln's McBean Pavilion. A database of approximately 1,200 individuals and organizations was utilized to promote the open house via a direct mail invitation. Invitees included regional water purveyors, businesses, developers, environmentalists, local government agencies, growers, ranchers, and all private well operators within the unincorporated portion of the WPCGMP study area. In support of these outreach activities, plan partners have maintained a project website at www.wpcgmp.org.

#### **FUTURE GOVERNANCE STRUCTURE**

Following adoption of the WPCGMP by all plan partners, an implementation agreement will be established. As part of this implementation agreement, a designated governance body will be appointed by the plan participants and tasked to oversee and facilitate the implementation of management actions intended to meet the established BMOs. The governance body's work and costs will be divided among the four plan participants.





#### SECTION 1

# Introduction

The City of Roseville (Roseville), the City of Lincoln (Lincoln), Placer County Water Agency (PCWA), and California American Water Company (CAW) have cooperatively developed this Western Placer County Groundwater Management Plan (WPCGMP) as detailed in this and subsequent sections. These entities, collectively referred to as the WPCGMP plan participants, joined to develop this groundwater management plan (GMP) because they all share some level of interest in the North American River Groundwater Sub-basin (Sub-basin). A component of the Sacramento Valley Groundwater Basin, the Sub-basin is roughly bounded by the American River to the south, the Sierra Nevada foothills to the east, the Bear River to the north, and the Sacramento River to the west. The WPCGMP area includes the Sub-Basin's eastern edge, Sacramento County to the south, the western edge of PCWA's service area, and Bear River to the north. Although the participants are not the only users of the Sub-basin, their political boundaries do cover the majority of the area where Placer County overlies the Sub-basin, as illustrated in Figure 1-1.

#### 1.1 REPORT ORGANIZATION

This document was prepared in accordance with the California Groundwater Management Act and Assembly Bill 3030 (AB3030) and Senate Bill 1938 (SB 1938), and includes the following sections;

**Section 1. Introduction.** This section provides the geographic setting, city and agency background, and summarizes other water resource management efforts implemented by entities located within and immediately adjacent to the WPCGMP area.

**Section 2. Water Resources Setting.** Prior to managing a basin, available water supplies must be identified and quantified. This section presents information on the availability of different water supplies and how they could be used within the WPCGMP area. This section also provides a description of the groundwater basin highlighting the unique hydrogeologic setting, an understanding of water quality issues, and a description of groundwater and surface water infrastructure currently in-place within the WPCGMP area.

**Section 3. Management Plan Elements.** This section identifies the five plan components (Stakeholder Involvement, Monitoring Program, Groundwater Resource Protection, Groundwater Sustainability, and Planning Integration) that constitute a GMP. An important aspect of this section is the identification of Basin Management Objectives (BMOs) and the actions necessary for BMO implementation.

**Section 4. Plan Implementation.** This section provides a schedule for implementing the BMOs, plan components, and actions; presents reporting criteria; and provides a description of the governance body and financing necessary to implement the WPCGMP.



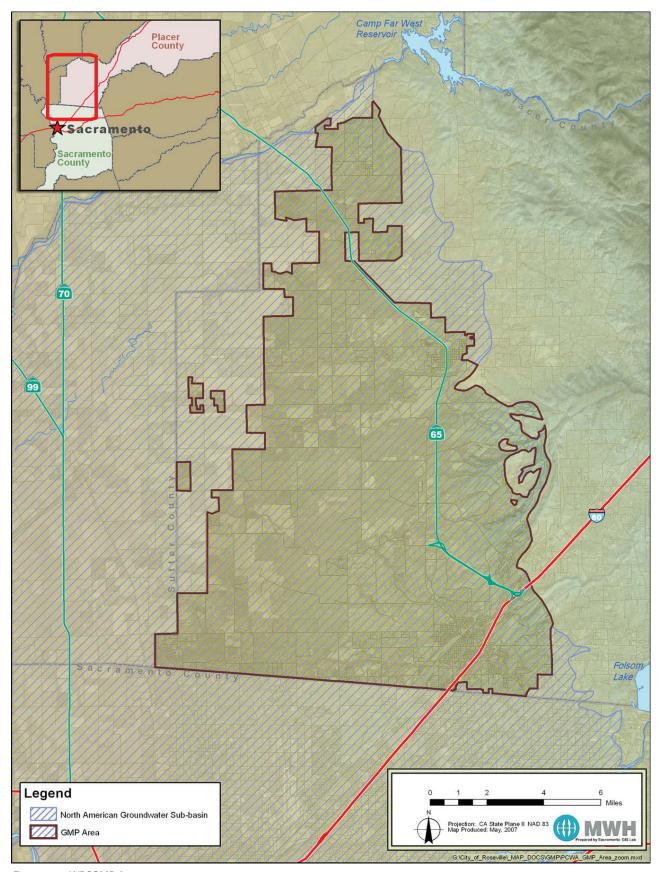


Figure 1-1 – WPCGMP Area

#### 1.2 PURPOSE AND GOALS OF THE WPCGMP

The goal of the WPCGMP is to maintain the quality and ensure the long-term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGMP area. To meet that goal, the purpose of this WPCGMP is to serve as the initial framework for coordinating the many separate management activities into a cohesive set of BMOs and related implementation actions.

#### 1.3 BACKGROUND

The following subsection presents background information on each plan participant. For reference, Figure 1-2 illustrates the extents of each participant's service area and/or city limits.

#### 1.3.1 Roseville

Established in 1909, Roseville is an incorporated city located approximately 16 miles northeast of Sacra-



mento, California in Placer County. It encompasses approximately 36 square miles with a population of approximately 104,000 people (Figure 1-1).

Roseville is responsible for providing all water (potable water service including treatment, water distribution and water conservation), wastewater (wastewater collection and treatment), recycled water (irrigation), and stormwater (protecting the water quality of Roseville's creeks), and other utility services to Roseville's residents, businesses and schools in its service area.

Currently, Roseville is experiencing a significantly higher rate of population growth than the national average. This growth has caused new urbanization in the north and northwest portions of the city. Historically, Roseville's water supply has come solely from

Folsom Lake, which is treated at Roseville's Water Treatment Plant (WTP). In order to provide water for backup demands, Roseville currently maintains four municipal supply wells to augment surface water supplies during daily and peak demand periods. To further maintain water reliability. Roseville is currently evaluating the feasibility of conjunctive use programs including direct groundwater recharge through Aquifer Storage and Recovery (ASR) and the use of spreading



City of Roseville ASR well

basins and passive groundwater recharge through in-lieu surface water delivery.

#### 1.3.2 Lincoln

Lincoln is an incorporated city located in western Placer County and has a population of approximately 35,000 people as of December 2005. Lincoln's



city limits for the proposed 2006 General Plan Update are shown on Figure 1-2. Similar to Roseville, Lincoln is experiencing a high rate of population growth causing urbanization within Lincoln's boundaries. Lincoln primarily relies on PCWA to meet its treated water supply need. To accommodate dry-year, emergency, and daily peak demands, Lincoln owns and operates several municipal water supply wells. Lincoln also has a conjunctive use program, which includes the use of recycled water from its Wastewater Treatment and Recycling Facility (WWTRF), groundwater and raw surface water supplies, in addition to the treated potable supplies from PCWA.

#### 1.3.3 PCWA

Placer County Water Agency was created in 1957 through approval of "The Placer



County Water Agency Act" by the California State Legislature for the purpose of developing and operating major water facilities in Placer County. PCWA is self-governed by an independently elected five-member Board of Directors and is under administrative direction of a general manager. The boundaries of PCWA generally coincide with the boundaries of Placer County.

PCWA carries out a broad range of responsibilities including water resource planning and management, retail and wholesale supply of irrigation water and drinking water, and production of hydroelectric energy.

PCWA is working toward obtaining a better understanding of groundwater in western Placer County through the implementation of different groundwater planning projects. At present, self-supplied and agricultural use of groundwater in the region is extensive. PCWA wishes to understand the magnitude of groundwater use and replenishment as it considers future water supply planning opportunities that exist in its primary surface water system.

The PCWA water system was established in 1968. PCWA supplies wholesale and retail water to a variety of customers including residential, commercial, industrial, and agriculture. A significant amount of raw water irrigates pastures, orchards, rice fields, farms, ranches, golf courses, and other uses. PCWA retails treated water to customers residing in the Placer County communities of Colfax, Auburn, Loomis, Rocklin, small portions of Roseville, and in the vast unincorporated areas of western Placer County. PCWA also wholesales treated water to Lincoln and several smaller special districts who then retail water to their customers. PCWA provides raw

water to Roseville, San Juan Water District, and Sacramento Suburban Water District on a contract basis. These agencies provide their own treatment and then retail the water to their customers.

As described below, and summarized in **Table 1-1**, PCWA has established five retail service zones within Placer County (four of which are illustrated on **Figure 1-2**):

- Zone 1 was created in 1968 for the purpose of financing the purchase of Pacific Gas and Electric's (PG&E) Lower Drum Division Water System. This system provided water service to the communities of Auburn, Bowman, Ophir, Newcastle, Penryn, Loomis, Rocklin, and Lincoln. It has four WTPs and one groundwater well and associated storage and distribution systems.
  - Zone 1 encompasses approximately 125 square miles. Today, Zone 1 includes territory under the land use authorities of Auburn, Rocklin, Lincoln, a portion of Roseville, Loomis, and Placer County. Zone 1 is separated into Upper Zone 1 and Lower Zone 1 to delineate the higher elevation service areas of Auburn, Bowman, and Ophir from the remaining lower elevation areas.
- Zone 2 was created in 1979 and provides retail water service to a small residential development of 47 units located in an unincorporated area southwest of Roseville. Formerly supplied by groundwater, the system was converted to surface water in 2004. Zone 2 is under the land use authority of Placer County.
- Zone 3 is a water system acquired from PG&E in 1984 that serves Colfax and portions of Placer County along the Interstate 80 corridor extending from Bowman to Alta. This zone utilizes surface water and has four water treatment plants.



- Zone 4 was created in 1996 and is located in the unincorporated Martis Valley portion of eastern Placer County. Zone 4 is served entirely by groundwater.
- Zone 5 was created in 1999 and assumed the boundaries of Placer County Zone 29. It was created to reduce reliance on groundwater supplies by providing surface water for commercial agriculture in the western-most section of Placer County. Zone 5 is served entirely by raw surface water supplies.

# 1.3.4 CAW California American Water Company



is a wholly-owned subsidiary of American Water, a provider of water services throughout North America. Within the WPCGMP area, CAW operates its West Placer Water System (WPWS) – an area with approximately 1,100 customer connections in 2005 (see **Figure 1-2**) – under a franchise agreement with the County of Placer. The WPWS is one of 10 service areas of CAW's Sacramento District.

Table 1-1. PCWA Retail Service Zones

PCWA Retail Service Zones	Locations	Water Service Provided
Zone 1 [1]	Auburn to Newcastle, Lincoln, Loomis, Rocklin, Granite Bay and Roseville, plus unincorporated areas	Treated and raw water
Zone 2	A small residential area of 46 customers (Bianchi Estates), southwest of Roseville	Treated water
Zone 3	Applegate, Colfax, Alta, and Monte Vista	Treated and raw water
Zone 4	Water from three wells is used to serve the Lahontan, Timilick, Hopkins Ranch, and Martis Camp developments in the Martis Valley	Treated water
Zone 5 [2]	Irrigation water for commercial agriculture in far western Placer County	Raw water

<sup>&</sup>lt;sup>[1]</sup> Zone 1 is separated into Upper Zone 1 and Lower Zone 1 based on the system configuration. Upper Zone 1 is solely met by PG&E water while Lower Zone 1 also receives Middle Fork Project (MFP) water.

<sup>&</sup>lt;sup>[2]</sup> Zone 5 was created in 1999 to reduce reliance on groundwater supplies by providing surface water for commercial agriculture in the western-most section of Placer County.

11 x 17 service area map goes here

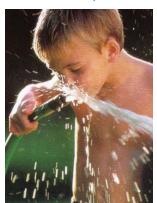
This page was left blank intentionally

This page was left blank intentionally

Recent residential developments in WPWS are required to use surface water exclusively. The water is provided under a wholesale agreement with PCWA and delivered via a wheeling agreement with the City of Roseville.

CAW intends to continue serving WPWS area customers predominately with PCWA-supplied surface water. However, PCWA and CAW intend to incorporate the conjunctive use of groundwater as needed to achieve the highest levels of water supply reliability.

#### 1.3.5 Other Adjacent Entities



The following subsection provides background information on other local and regional entities immediately adjacent or within the WPCGMP area including Placer County, South Sutter Water District, Natomas Central Mutual Water Company, the Sacramento Groundwater Authority (SGA), and the Regional Water Authority (RWA), (**Figure 1-3**). These agencies, like the WPCGMP participants,

each have some level of interest in the North American groundwater basin, and therefore are likely to have some interest in its management.

#### 1.3.5.1 Placer County

Placer County serves a population of over 300,000 from its border with Sacramento County to the Nevada state line. County communities include Roseville, Lincoln, Rocklin, Loomis, Auburn, Foresthill, Colfax, Tahoe City, and Kings Beach. Placer County, as an



entity, does not provide water service to customers, but provides services including Agricultural and Environmental permitting. In addition, Placer County government serves as the land use authority for unincorporated areas.

## 1.3.5.2 Natomas Central Mutual Water Company (NCMWC)

NCMWC is located in northwestern Sacramento County and southern Sutter County, adjacent to the Sacramento River (Figure 1-3). It provides irrigation water to approximately 280 members/shareholders for agricultural use. NCMWC has water rights and contracts to Sacramento River water. Surface water is supplemented with groundwater from privately owned wells.

#### 1.3.5.3 South Sutter Water District (SSWD)

SSWD is located in southern Sutter and western Placer counties, with the Bear River as the northern boundary and stretching

southwest between Highway 65 and Highway 70 to Pleasant Grove and Curry Creeks (Figure 1-3). SSWD was formed in 1954 to develop, store, and distribute surface water supplies to supplement ground-



water supplies as needed. SSWD is considered a "supplemental" water district because it does not provide full service to landowners. Instead, it allocates supplemental surface supplies according to acreage of land owned. SSWD covers 57,012 acres with approximately 82 percent in rice production. Most of the SSWD's customers are agriculture-based and utilize private wells to obtain the majority of their water supplies.

#### 1.3.5.4 Nevada Irrigation District (NID)

NID is an independent public agency governed by an elected board that supplies nearly 25,000 homes, farms and businesses in Nevada and Placer counties in the foothills of Northern California's Sierra Nevada Mountains. NID collects water from the mountain snowpack and stores it in a system of 10 reservoirs. As water flows to customers in the foothills, it is used to generate clean hydroelectric energy and to provide public recreational opportunities. NID supplies both treated drinking water and irrigation water.

#### 1.3.5.5 San Juan Water District (SJWD)

SJWD is a community services district created by a vote of the citizens in 1954. It wholesales water to Citrus Heights and Fair Oaks Water Districts, Orange Vale Water Company, the City of Folsom (north of the American River), and periodically to Sacramento Suburban Water District. Additionally, SJWD retails water to customers in Granite Bay and the northeast portion of Sacramento County.

SJWD does not have access to groundwater in its retail service area which includes a very small portion of the southeast corner of the WPCGMP area. SJWD is a participating agency of the Sacramento Groundwater Authority (SGA), and is actively involved in implementing SGA's GMP completed in 2003.

#### 1.3.5.6 Sacramento Groundwater Authority (SGA)

SGA is a joint powers authority (JPA) created to manage the portion of the North American River Groundwater Sub-basin directly south of the WPCGMP area. The SGA boundary includes only the portion of Sacramento County north of the American River (Figure 1-3), referred to as the North Area Basin. SGA's formation<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>The SGA was originally formed in 1998 as the Sacramento North Area Groundwater Management Authority. In 2002, it was renamed the Sacramento Groundwater Authority.

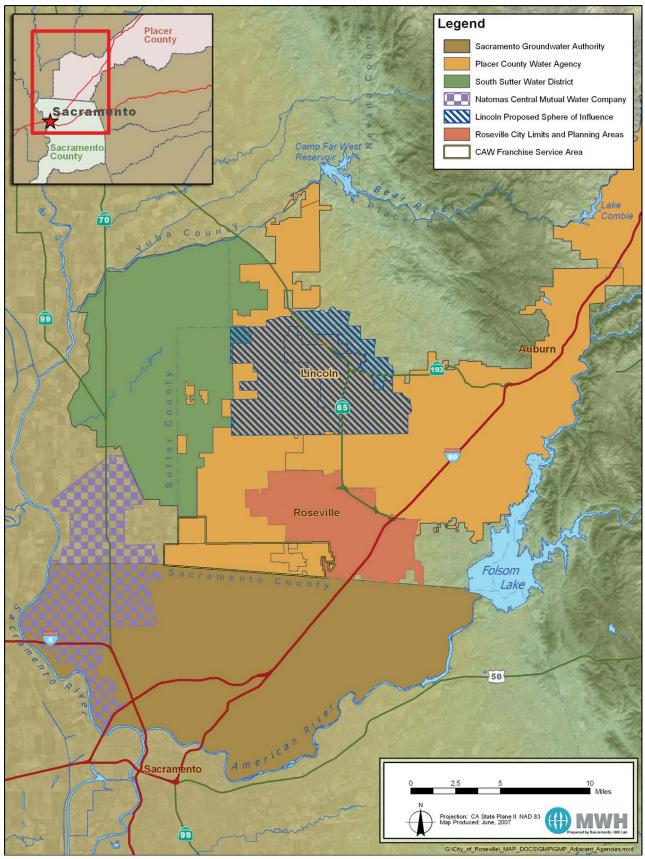


Figure 1-3 – Adjacent Entity Service Areas

in 1998 was a result of a coordinated effort by the Sacramento Metropolitan Water Authority (SMWA) and the Water Forum¹ (WF) to establish an appropriate groundwater management structure for the North Area Basin. The cities of Citrus Heights, Folsom, Sacramento, and the County of Sacramento, signatories to the JPA, hold police powers to manage the underlying groundwater basin. These entities delegate authority to SGA, which in turn manages the basin through representatives of 14 local water purveyors and one representative from agricultural and self-supplied groundwater pumpers. These representatives serve as the SGA Board of Directors².

SGA's management responsibility is a commitment to not exceed the average annual sustainable yield of the North Area Basin, which was estimated to be 131,000 acre-feet<sup>3</sup> in the Water Forum Agreement (WFA).

#### 1.3.5.7 Regional Water Authority (RWA)

RWA represents a number of regional water supply interests and assists members in protecting and enhancing the reliability, availability, affordability, and quality of water resources. One of the principal missions of RWA is facilitating implementation of the conjunctive use program prescribed by the WFA. RWA currently has 19 water purveyor members and three associate members<sup>4</sup>, spanning Placer, Sacramento, Yolo, and El Dorado counties. Roseville, Lincoln, PCWA, and CAW are members of RWA.

#### 1.4 EXISTING GMPS

The following subsection provides a summary of the GMPs completed by WPCGMP participants and the adjacent entities including SGA, SSWD, and NCMWC.

# 1.4.1 WESTERN PLACER GROUNDWATER MANAGEMENT PLAN

In November 1996, PCWA adopted a Resolution of Intent to draft an AB3030 compliant GMP for the western Placer County region of their service area. The plan area included the cities of Roseville and Rocklin and the unincorporated portion of western Placer

County, west of Highway 65 and outside of Lincoln. PCWA and Roseville adopted this joint Western Placer GMP in 1998. In 2003, PCWA updated the plan to achieve Senate Bill 1938 (SB1938) compliance. The goal of the plan was to manage groundwater resources to the benefit of western Placer County and to support the Placer County General Plan. This goal was pursued through a coordinated effort with all stakeholders in the plan area and implementation of activities consistent with other groundwater management planning efforts in the region. The plan identified certain implementation activities:

- Monitoring groundwater levels and groundwater quality.
- Identifying groundwater recharge opportunities, with particular emphasis on the area adjacent to the Placer/Sacramento County line.
- Identifying conjunctive use opportunities for non-residential uses in the area north of Pleasant Grove Creek.
- Evaluating the safe yield of the groundwater basin underlying the study area.
- Maximizing groundwater management coordination with all jurisdictions, landowners, and the general public within western Placer County, with those jurisdictions in north Sacramento County portion of the basin, and with the appropriate State and federal agencies.

## 1.4.2 LINCOLN GROUNDWATER MASTER PLAN (2003)

Lincoln completed and adopted a SB1938 compliant GMP in 2003. Its GMP provides a framework to effectively manage and protect its groundwater resources and includes BMOs as well as a series of management actions to be implemented. The GMP mission statement and primary groundwater management goal is to "ensure a viable resource for use by the City (Lincoln) to meet backup, emergency and peak demands without adversely affecting adjacent areas."

The 2003 GMP boundaries includes the City of Lincoln's sphere of influence (SOI), an area that extends slightly beyond the current

<sup>&</sup>lt;sup>1</sup>The Water Forum is a diverse group of business and agricultural leaders, citizens groups, environmentalists, water managers, and local governments in the Sacramento Region that joined together to equally fulfill the objectives of water supply reliability and environmental values of the Lower American River. In 1999, the WF approved the comprehensive Water Forum Agreement (WFA) to fulfill those objectives. The WFA is available online at http://www.waterforum.org or contact the Water Forum office at (916) 808-1999.

<sup>&</sup>lt;sup>2</sup>SGA Board members include representatives of California American Water Company, Carmichael Water District, Citrus Heights Water District, City of Folsom, City of Sacramento, County of Sacramento, Del Paso Manor Water District, Fair Oaks Water District, Natomas Central Mutual Water Company, Orangevale Water Company, Rio Linda/Elverta Community Water District, Sacramento Suburban Water District, San Juan Water District, Golden State Water Company, and individual representatives from agriculture and self-supplied groundwater users (principally parks and recreation districts).

<sup>&</sup>lt;sup>3</sup>This value was estimated based on water use and facilities in the basin at the time of the WFA. This value was based on a number of assumptions, and was not intended to be a fixed value that could not be modified as conditions and assumptions changed in the basin. Examples of changed conditions include new or improved water conveyance, treatment, and storage facilities or changes in water supply contracts.

<sup>&</sup>lt;sup>4</sup>The membership of the RWA encompasses water users in both Sacramento County and Placer County including: California American Water Company, Carmichael Water District, Citrus Heights Water District, City of Folsom, City of Lincoln, City of Roseville, City of Sacramento, City of West Sacramento, Del Paso Manor Water District, El Dorado Irrigation District, Fair Oaks Water District, Fruitridge Vista Water Company, Orangevale Water Company, Placer County Water Agency, Rancho Murieta Community Services District, Rio Linda/Elverta Community Water District, Sacramento Suburban Water District, San Juan Water District, and the Golden State Water Company. Associate members do not directly retail drinking water and do not vote in RWA matters. Associate members include: El Dorado County Water Agency, Sacramento Municipal Utility District, and Sacramento Regional County Sanitation District.

city limits (see Figure 1-3). Lincoln anticipates it will expand its current SOI as part of its 2006 General Plan Update. A draft version of the General Plan Update was published on October 3, 2006.

In addition to its planning benefit, the Lincoln GMP contains a sophisticated array of geophysical information regarding the basin underlying its SOI. Technical information collected to date, which have been included in the 2003 GMP and in subsequent investigations, has generated an extensive data set that Lincoln intends to use to further understand and manage its underlying groundwater resources. With assistance from an AB303 grant from the California Department of Water Resources (DWR), Lincoln installed five new multi-completion monitoring wells in 2005 to aid in basin management activities.

The GMP provides a framework process that describes the series of steps necessary to manage the basin, beginning with collecting the necessary data and developing a stakeholder participation program.

The Lincoln GMP contains the following BMOs:

- Maintain groundwater elevations at a level that will ensure an adequate groundwater supply for backup, emergency and peak demands, without causing significant adverse impacts to adjacent areas.
- Preserve overall groundwater quality by stabilizing existing groundwater contaminant migration, avoiding known contaminated areas, and protecting recharge areas.
- Ensure that the direction of groundwater flow continues its southwesterly flow pattern despite additional groundwater extraction or other potential influences.

To achieve these BMOs, Lincoln recognized that a substantial number of management actions must be continued or implemented. In many instances these actions apply to more than one BMO and relate to multiple AB 3030 management plan objectives. Table 1-2 summarizes the management actions that as of 2003 (1) have already been undertaken, (2) are slated for implementation and have a budget, or (3) are still in the planning stages.



#### 1.4.3 SGA GROUNDWATER MANAGEMENT PLAN

SGA adopted its GMP in December 2003 to establish goals, man-

agement objectives, and components needed to manage the groundwater basin. SGA's GMP provides a starting point from which SGA will continually assess the status of the groundwater basin and make ap-



American River

propriate management decisions to ensure a sustainable resource. SGA's GMP contains the following management objectives:

- Maintain or improve groundwater quality in the SGA area for the benefit of basin groundwater users.
- Maintain or improve groundwater elevations that result in a net benefit to basin groundwater users.
- Protect against any potential inelastic land surface subsidence.
- Protect against adverse impacts to surface water flows in the American River and Sacramento River.
- Protect against adverse impacts to water quality resulting from interaction between groundwater in the basin and surface water flows in the American River and Sacramento River.

## 1.4.4 SSWD GROUNDWATER MANAGEMENT

On February 23, 1993, SSWD adopted a Resolution of Intention to draft a GMP (SSWD, 1997). Subsequent to adopting this resolution, SSWD had directed the preparation of a report on groundwater conditions within SSWD. The report covers the period 1970 through 1993 and updated a prior report for the period 1963 to 1968. The plan area included all SSWD land located within Sutter and Placer counties.

SSWD's primary goal in developing the GMP was "to work cooperatively with landowners within the district to most efficiently manage the groundwater resources and to continue with an efficient and effective conjunctive use program." The plan included components identified in California Water Code section 10753.7, which are:

- Monitoring (groundwater levels and quality)
- Conjunctive use program and mitigation of overdraft
- Relations with State and Federal regulatory agencies
- Well construction policies and administration of well abandonment and destruction program

#### 1.4.5 NCMWC Groundwater Management Plan

In 2000, NCMWC adopted a GMP for its service area in both Sacramento and Sutter counties (Luhdorff & Scalmanini Consulting Engineers (LSCE), 2000). This GMP applies to NCMWC's Sutter County service area while, SGA's GMP covers the Sacramento County portion of NCMWC's service area. No additional information is available from this GMP.

#### 1.5 OTHER MANAGEMENT EFFORTS

Over the past several decades, water supplies of the region have been affected by:

- Extended drought and wet periods
- Increased push to dedicate surface water for environmental purposes
- Declining groundwater levels
- On-going and potential impacts to surface water quality and groundwater quality

At the same time, demand for water in the region has continued to grow. To address these challenges, water purveyors in the region have invested substantial time and resources in a progression of regional planning efforts. This section summarizes the planning efforts that were led by WPCGMP participants.

#### 1.5.1 Roseville

The following subsection provides a summary of relevant Roseville planning efforts.



#### 1.5.1.1 Urban Water Management Plan (2005)

Roseville's Urban Water Management Plan (UWMP) was originally adopted in 1986, and has been updated in 1991, 2002, 2003 and 2005. The Roseville UWMP provides a framework for public participation for the planning of water resource supply and water use provisions for all residential, commercial, industrial, institutional/government, landscape/recreational, and agricultural sectors. The UWMP includes a supply and demand comparison, outlines future

projects to meet projected water use including water supply, treatment, storage, distribution and groundwater well facilities, and contains water demand management measures and water shortage contingency plans. The plan also identifies Roseville's current water recycling program and future opportunities.

#### 1.5.1.2 General Plans (1992, 1993 and 2004)

Although Roseville's first General Plan was adopted in 1963, and consisted basically of a land use map, the first comprehensive General Plan for Roseville was adopted in 1977. While various elements were updated since 1977, the 1992 General Plan represented the first comprehensive update since that time. The 1992 General Plan did not include land use allocations beyond those previously identified, but it did include substantial policy revisions. Since the 1992 update, land use allocations have been modified by the Roseville City Council several times with the adoption of the Del Webb, North, Highland Reserve North, and Stoneridge Specific Plans, and with the annexation of the Pleasant Grove Waste Water Treatment Plant (WWTP) and Foothill Business Park properties. However, the core polices of the 1992 update were retained. A technical update to the General Plan was accomplished in January 2003, and it focused on updating information that had changed as a result of previous City Council actions (adoption of specific plans and update of the Capital Improvement Program, etc).

Also, in 2003 the General Plan was updated with the adoption of the West Roseville Specific Plan, annexation, and sphere of influence amendment. With the adoption of the Specific Plan and annexation, several revisions to the General Plan occurred including inclusion of the Roseville's previously adopted Guiding Principles for development west of Roseville, a change in land use allocation, and map revisions. The General Plan integrates Roseville's nine adopted specific plans. These plans are incorporated as a part of the General Plan and should be referred to for specific requirements.

The Roseville General Plan is designed to be:

- Long-range: However imperfect the vision of the future is, almost any development decision has effects lasting more than 20 years. In order to create a useful context for development decisions, the General Plan looks towards the year 2010 and beyond.
- Comprehensive: The General Plan provides direction to coordinate all major components of the community's physical development.
- General: Because it is long-range and comprehensive the General Plan, in most cases, is general. The plan's purpose is to serve as a framework for detailed public and private development proposals. It establishes requirements for additional planning studies, which must be completed prior to any future specific plan to modify the General Plan land use allocation.

The Roseville General Plan serves to:

 Enable Roseville's Council and planning commission to establish long-range development policies.

Table 1-2. City of Lincoln GMP Management Action Plans

		вмо		AB3030
Action	Elevation	Quality	Gradient	Component
Develop and implement a groundwater monitoring program				
a. Expand the network	X	Х	X	7
b. Collect relevant well and aquifer data	X	X	X	7
c. Establish data collection methods and frequency	X	X	X	7
d. Develop a groundwater database	X	Х	Х	7
e. Identify water quality constituents of concern	X	Х	Х	1, 7
f. Monitor fresh water/saline water interface	X	Х	Х	1, 7
g. Monitor status of known contaminant sites	X	Χ	Х	3, 7
h. Annually prepare and present data	X	Х	Х	7
i. Research and apply for relevant grant funding	X	Χ	X	7
2. Improve understanding of groundwater basin				
a. Develop and utilize a groundwater model	X			1, 2, 3, 5, 6, 8
b. Characterize and evaluate local conditions	X			1, 2, 3, 5, 6, 8
c. Develop a water budget, estimate the perennial yield	X			5, 6, 8
d. Research and apply for relevant grant funding	X			1, 2, 3, 5, 6, 8
Continue long-term planning and evaluation of potential projects				
a. Explore conjunctive use opportunities	X		X	5, 6, 8, 10
b. Develop a recharge program	X		X	5, 6, 10
c. Review proposed development plans	X	Х	X	2, 12
d. Research and apply for relevant grant funding	X	X	X	5, 6, 10
4. Establish operational requirements for City production wells				, , ,
a. Develop spacing and well operation guidelines	X	Х	Х	1, 3, 9
b. Establish policies and protocols for BMOs	T X	X	X	7, 8
Develop and implement a Groundwater Protection Program				7,0
a. Conduct a search for abandoned wells		Х		1, 4
b. Review permits for the destruction of wells		X		1, 4
c. Establish standard well construction policies		X		3, 9
d. Determine well requirements to minimize saline upconing		X		1, 9
e. Map known contaminated sites		X		3
f. Research and apply for relevant grant funding		X		1, 3, 4, 9
6. Continue Public Participation				1, 3, 4, 9
·	V	V	V	7
a. Make results of monitoring program available     b. Continue Advisory Committee	X	X	X	
c. Engage state and federal regulatory agencies		^	_ ^	11, 12 11
d. Continue to engage local agencies and interests				11
u. Continue to engage local agencies and interests				11

- Provide a basis for judging whether private development proposals and public projects are in harmony with the policies.
- Guide public agencies and private developers in designing projects that are consistent with Roseville's policies.

Regarding groundwater recharge and water quality, Roseville's goals outlined in the General Plan are to:

- Continue to improve surface water quality and accommodate water flow increases.
- Enhance the quality and quantity of groundwater resources.

Plans to protect the Roseville's water resources and water quality include the development of standards for urban run-off, monitoring groundwater, and protection of waterways and groundwater recharge areas.

### 1.5.1.3 Aquifer Storage and Recovery (ASR) Phase I and II Testing at the Diamond Creek Well

Roseville's ASR program is being developed with the intention of using the aquifer to store surplus water in "wet" years for extraction during times of peak demand as part of a conjunctive use program. Roseville's ASR program is currently being evaluated using a two phase test approach. Phase I testing was completed in 2005 and consisted of a relative short duration pilot scale cycle test (cycle test). This is followed by a scheduled 30-month Phase II demonstration test. Both phases of testing are being conducted at the Diamond Creek Well (DCW) in the northwest portion of Roseville.

Constructed in 2002, the DCW is used for backup water supply and was specifically designed for ASR use. Three monitoring wells were constructed adjacent to the DCW for the purpose of data collection during testing. Potable water from the Roseville WTP is conveyed to the DCW for the purpose of ASR testing.

#### 1.5.1.3.1 Phase I Pilot Scale Testing (Cycle Test)

Roseville submitted a Report of Waste Discharge (ROWD) on January 7, 2003, as a requirement of the Central Valley Regional Water Quality Control Board (CVRWQCB) to permit an ASR Phase I cycle

test. The CVRWQCB granted a waiver to allow testing on May 6, 2003. The Phase I cycle test was performed from May 5, 2004, to September 20, 2004, and consisted of three general stages of data collection: baseline, injection, and extraction.

The baseline stage consisted of a series of monitoring and sampling events. The injection stage of the cycle test consisted of 26 days of continuous surface water injection at an average flow rate of approximately 1,375 gallons per minute (gpm). The total volume of water injected was 158 acre-feet (AF). During the extraction stage, flow rates averaged approximately 3,434 gpm. The total volume of water extracted during three phases was 439 AF, representing 278 percent of injected water volume. During the three stages of cycle testing groundwater elevation and quality data were frequently collected at the DCW and at the nearby monitoring wells.

Data from this Phase I cycle test were used to provide an understanding of local changes in groundwater elevations and quality, and to explore additional ASR testing (Phase II). Cycle testing showed very favorable conditions with no apparent adverse impacts to groundwater levels and overall improvements to groundwater quality.

#### 1.5.1.3.2 Phase II Demonstration Testing

Roseville submitted a second ROWD to the CVRWQCB on May 16, 2005, for Phase II demonstration testing. This ROWD was granted by the CVRWQCB on August 5, 2005. Phase II activities began in November 2005 and are scheduled to conclude in 2008. The primary objectives of Phase II are to further evaluate system operation and to determine the fate and transport of trace levels of disinfection byproducts stored underground. Phase II ASR demonstration testing includes five stages of data collection as follows:

- a) One month baseline
- b) Six months of injection totaling 1,094 AF of water at a rate of 1,375 gallon per minute (gpm)
- c) Eleven months of injected water storage in the aguifer



Diamond Creek ASR Well

- d) Ten months of extraction at 2,500 gpm recovering 3,314 acrefeet of water
- e) Two months of post testing

Although final results of Phase II extraction tests are pending, and therefore not yet analyzed, prior results and recent correspondence with the CRVWQCB indicate that Roseville will be able to work towards designing and permitting a full-scale ASR system within its jurisdiction.

## 1.5.1.4 Dry Creek Recycled Water Groundwater Re charge Study (2004)

The Dry Creek Recycled Water Groundwater Recharge Feasibility Study identifies and evaluates potential opportunities to recharge groundwater in Placer and Sacramento counties through application of recycled water. The study identifies and screens possible direct and in-lieu recharge opportunities and then evaluates these opportunities based on economics, legal considerations, public perception, and potential for groundwater benefit. The four principal goals of the study are to:

- 1. Identify the potential market in the region for recycled water for irrigation purposes.
- 2. Evaluate participation in the SGA's regional groundwater banking and exchange program.
- 3. Investigate the institutional and regulatory issues that exist in implementing a recycled water/groundwater recharge program.
- 4. Identify mechanisms for protecting Roseville's existing water rights.

The potential benefits provided by the recharge programs are estimated assuming the water is used for two general purposes:

- 1. A component of a regional water transfer program such as that undertaken by the SGA in 2002.
- 2. A source of dry-year water supply for Roseville.

The study also quantifies the potential benefit that a recycled water recharge program may have on the underlying groundwater aquifer. When a system is established by the SGA to give credit to agencies that contribute to groundwater recharge, the study will serve as the foundation for Roseville to integrate their program with SGA's efforts.

The study recommends that water purveyors in the Sacramento region will need to look for more sophisticated alternatives for supplying water. Recycled water is an underutilized resource that can help to augment existing water supplies. The Dry Creek Recycled Water Groundwater Recharge Feasibility Study can help Roseville to continue to meet water users' needs, while ensuring the long-term sustainability of the region's groundwater basin and protecting the Lower American River through cooperation with the SGA.

#### 1.5.2 LINCOLN

The following subsection provides a summary of relevant Lincoln planning efforts.

#### 1.5.2.1 Reclamation Master Plan (2004)

Recognizing the value of water and in conjunction with State Water Resources Control Board's policy encouraging the reclaimed water, Lincoln developed a Reclamation Master Plan to distribute

reclaimed water to industry, landscaping and park facilities within Lincoln. The Reclamation Master Plan lays out steps for development of a reclaimed water distribution system incorporating the Reclamation Booster



Pump Station constructed with the WWTRF and converted sewer force mains. It also defines the phases for project implementation based on available reclaimed water, varying reclamation demands of different users at different times, and costs.

#### 1.5.2.2 UWMP (2005)

In compliance with DWR requirements, Lincoln updated its UWMP in 2005. The Lincoln UWMP outlines a public outreach strategy, water supplies, water quality, water demands, and supply and demand comparisons. The UWMP also describes Lincoln's recycled water usage and plans for expansion, water conservation measures, its progress toward conservation implementation, and a water shortage contingency plan.

#### 1.5.2.3 General Plan Update (2006)

Lincoln's General Plan Update was published on October 3, 2006. The update serves several purposes, including:

- To provide a description of current conditions in the city that can be used to assess the current state of development in the city and highlight the trends impacting the city.
- To provide the public with information on Lincoln and to provide opportunities for meaningful participation in the planning and decision-making process.
- To identify planning issues, opportunities, and challenges that should be addressed in the General Plan update.
- To ensure that the General Plan is current, internally consistent, and consolidated for ease of use.
- To improve coordination between the city and local, State, and Federal agencies regarding land use and resource issues.
- To provide guidance for city departments in the planning and evaluation of future land and resource decisions.

#### 1.5.3 PCWA

The following subsection provides a summary of relevant PCWA planning efforts.

#### 1.5.3.1 Integrated Water Resources Plan (IWRP)

This document presents an assessment of the water supply and demand situation in western Placer County. The objectives of this IWRP are as follows:

- Provide a baseline for organized water resources planning within Placer County.
- Coordinates water resources planning for all of the communities in western Placer County.
- Develop water demand versus supply scenarios to create strategy for normal and dry year conditions.
- Provide water demand planning guidance to help PCWA plan for water treatment and conveyance facilities.

The IWRP considers several growth scenarios beyond those in Placer County's current General Plan. Groundwater and reclaimed water were considered as future water supplies, along with updated water demand factors and increased water conservation. The main conclusion of the IWRP is that there is adequate water supply within western Placer County to meet all the demands for each of the growth scenarios.

## 1.5.3.2 Western Placer County Groundwater Storage Study (2005)

The objective of PCWA's Western Placer County Groundwater Storage Study is to develop alternatives for increasing groundwater storage and conjunctive use in western Placer County. Increased conjunctive use could lead to greater reliability of water supply for agricultural water users and greater water management flexibility for PCWA. North American River Integrated Groundwater Surface Water Modeling data were used to evaluate sustainable yield in the study area. The study was conducted with grant support from DWR through Proposition 13 bond funds (the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act).



#### 1.5.3.3 Water Systems Infrastructure Plan (2003)

PCWA prepared the Water Systems Infrastructure Plan (WSIP) which outlined a plan to ensure a reliable, long-term water supply for its customers, based on anticipated growth in PCWA's service area. The objectives of the WSIP are:

- To provide a comprehensive, detailed evaluation of PCWA's water supplies.
- To identify the possible alternatives of water diversion, treatment, and conveyance facilities to maximize the use of PCWA's water entitlement.

The WSIP includes:

- A review of water demands
- A description available water supplies and an outline of the related constraints and condition
- A frameword for reviewing the development of three logical increments of new surface water supplies and an evaluation of the reliability of PCWA's surface water distribution
- A description of PCWA's water distribution system and operations
- Identification of a timeline for constructing new capital facilities based on projected growth scenarios for each water supply alternative
- Development of a set of reliability criteria, test of the alternative infrasturcture
- Development of a Capital Improvement Project List and comparison of the needed water connection charge for each alternative Infrastructure Program Alternative
- An Environmental Sensitivity Study and a general sensitivity analysis for several identified near-term projects.

#### 1.5.3.4 UWMP (2005)

In compliance with DWR requirements, PCWA updated its UWMP in 2005. According to the UWMP, PCWA provides retail water service to approximately 220,000 people in Placer County. Water service is provided for approximately 36,000 agricultural, municipal, and industrial connections, with both raw and treated water, in the cities of Auburn, Colfax, Loomis, and Rocklin, and to most of the small communities in unincorporated western Placer County along the I-80 corridor below Alta. PCWA also provides treated water to several mutual water companies within its Zone 1 service area that operate their own distribution systems. UWMP also describes the wholesale water deliveries of treated water to Lincoln and CAW and untreated water off of its canal system to several smaller water utilities that provide their own treatment and distribution service. PCWA also provides surface water out of the American River that is diverted and used by SJWD, Roseville, and Sacramento Suburban Water District. These wholesale customers are required to prepare their own UWMPs.

#### 1.5.4 CAW

The following subsection provides a summary of relevant CAW planning efforts.

## 1.5.4.1 West Placer Water System Comprehensive Planning Study (2006)



The West Placer Water System is a new system and is expected to grow. CAW developed the Comprehensive Planning Study (CPS) to provide a review and analysis of the supply, production, and distribution facilities for the West Placer Water System. The primary goal of the CPS is to identify and prioritize capital improvements that are necessary to ensure that the West Placer Water System can safely and reliably meet current and projected water demands, while continuing to provide safe, adequate, and reliable service through the planning period. The CPS addresses the following elements:

- Customer demand projections through the year 2020.
- Evaluation of the adequacy for existing and future source of supply.
- Production facility assessment including existing and proposed water quality, treatment, and safety standards.
- Analysis of the water system transmission, distribution, and storage needs through modeling.

As described in the CPS, the current population of CAW's West Placer Service Area is 3,041 (SACOG, 2006). Demographic estimates for the project growth scenario are based on land use. According to the Enhanced General Plan growth scenario, anticipated by 2020 build-out of the West Placer Services Area will have approximately 24,500 residential dwelling unites (DU) (16,721 residential customer connections.) . According to the CPS, this will equate to a 2020 demand of 15,748 acre-feet per year.

Current sources of supply for the West Placer Service Area rely on treated surface water supplies from PCWA. This supply is conveyed through Roseville's distribution system to CAW's connection point in West Placer. Groundwater is available for emergency use only through an interconnection with the CAW Antelope system

via the Cook-Riolo inter-tie. The current Placer County franchise agreement with CAW restricts the use of groundwater.

The CPS provides an analysis of the production facilities and distribution system in the West Placer Service Area and outlines specific project recommendations. These recommendations include improvements to production, storage, and distribution facilities. Projects identified in the CPS have been divided into two groups: Priority A and Priority B. Priority A projects are expected to be incorporated into CAW's Strategic Capital Expenditure Plan (SCEP) as the budget allows. Priority A projects are needed to comply with current or anticipated future regulations, address significant safety concerns, or ensure that adequate water supplies are available to meet projected demands. Priority A projects include:

- Walerga Road Tank and Booster Station
- Additional PCWA Supply Connection at PFE Road
- Crowder Lane Control System Upgrades
- Disinfection Byproducts Study

Priority B projects address longer-term needs, that relate to future growth or improvements that enhance system reliability. This may include developer-funded transmission and distribution facilities.

#### 1.5.4.2 UWMP (2005)

The Northern Division of CAW completed its UWMP in 2005 under the terms of AB 797 (1983). The Northern Division of CAW is the largest private water operation in Sacramento County and consists of ten districts serving 171,000 people in the operating service area including Antelope, Arden, Lincoln Oaks, Parkway, Suburban/Rosemont, Security Park (Sunrise), West Placer, Isleton, Walnut Grove, and Lakefield.

The West Placer Service Area within the Northern Division of the CAW is located within the WPCGMP region (see Figure 1-2). CAW has a franchise agreement to supply water to the West Placer Service Area as it develops in future years. The West Placer Service Area is the only portion of the Northern Division of CAW that relies exclusively on surface water, which is supplied from

PCWA. Currently, CAW serves less than 1,000 customers in the West Placer service area, but is expected to grow to as many as 18,000-22,000 connections as the area approaches build-out. Some newly developing areas in the West Placer Service Area are provided with recycled water from



Roseville's Dry Creek Wastewater Treatment Plant. This recycled water is used for irrigation of landscaping in parks, street medians, the Morgan Creek Golf Country Club, and open space areas. As part of UWMP implementation, CAW will continue to support the use of reclaimed water for irrigation and potentially other uses in the West Placer Service Area.

#### 1.5.5 REGIONAL

The following subsection provides a summary of regional planning efforts.

### **1.5.5.1** Placer County General Plan (1992 and 1994)

The Placer County General Plan consists of two types of documents: the Countywide General Plan, and a set of more detailed community plans covering specific areas of the unincorporated County.

The Countywide General Plan provides an overall framework for development of the County and protection of its natural and cultural resources. The goals and policies contained in the Countywide General Plan are applicable throughout the County, except to the extent that County authority is preempted by cities within their corporate limits

Adopted in the same manner as the Countywide General Plan, a community plan provides a more detailed focus on a specific geographic area within the unincorporated county. The goals and policies contained in a community plan supplement and elaborate upon, but do not supersede, the goals and policies of the Countywide General Plan.

The Countywide General Plan consists of two documents: the General Plan Background Report and the General Plan Policy Document. The Background Report inventories and analyzes existing conditions and trends in Placer County. It provides the formal supporting documentation for general plan policy, addressing 11 subject areas: land use, housing, population, economic conditions and fiscal considerations, transportation and circulation, public facilities, public services, recreational and cultural resources, natural resources, safety, and noise.

The General Plan Policy Document includes the goals, policies, standards, implementation programs, quantified objectives, the Land Use Diagram, and the Circulation Plan Diagram that constitute Placer County's formal policies for land use, development, and environmental quality.

The General Plan Policy Document is divided into three main parts. Part I describes the Countywide Land Use Diagram and allowable uses and standards for each of the designations appearing on the diagram. Part I then describes standards for land use buffer zones. Finally, Part I describes the Countywide Land Use Diagram, standards for the roadway classification system on the diagram, and standards for transit corridors.

Part II contains explicit statements of goals, policies, standards, implementation programs, and quantified objectives. Part II is divided into the following ten sections, which roughly correspond to the organization of issues addressed in the General Plan Background Report. These are as follows: Land Use, Housing (adopted separately June 22, 1992), Transportation and Circulation, Public Facilities and Services, Recreational and Cultural Resources, Natu-



ral Resources, Agricultural and Forestry Resources, Health and Safety, Noise, and Administration and Implementation.

Part III of the Policy Document consists of general standards for the consideration of future amendments to the General Plan.

Ultimately, the intent of the Placer County General Plan is to protect the County during future urban growth and to partially provide an understanding of the approval process necessary to protect/promote groundwater interests.

### 1.5.5.2 Water Forum Agreement and Successor Effort

Beginning in 1993, the Water Forum process brought together a diverse group of stakeholders comprised of business and agricultural leaders, citizens' groups, environmentalists, water managers, and local governments to evaluate available water resources and the future water needs of the Sacramento region, including communities from Sacramento, Placer and El Dorado counties. These stakeholders identified two coequal objectives to guide in the development of the Water Forum Agreement (WFA):

- Provide a reliable and safe water supply for the region's economic health and planned development through the year 2030.
- Preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

The WFA also established a Water Forum Successor Effort (Successor Effort) to administer the implementation of the agreement. The Successor Effort:

- Ensures continuity between the Water Forum and the Successor Effort.
- Preserves existing technical expertise.
- Avoids the costs, confusion and delays inherent in transferring the Successor Effort to a different organization.
- Avoids creating another redundant government entity.

All parties which signed the Water Forum Agreement; including Roseville, PCWA, and CAW are Water Forum signatories and

are full participants in the Successor Effort. In addition, there is a supplementary funding agreement which includes the City of Sacramento, the County of Sacramento and the other agencies (including agencies outside of Sacramento County) which, consistent with the funding principles, are paying to support the work of the Successor Effort. It is important to note that:

- All WFA signatories have equal standing in the Successor Effort whether they are a public agency, investor-owned utility, or citizen interest/advocacy organization.
- Though Water Forum Successor Effort staff will be employees or contractors of the City of Sacramento, the Successor Effort representatives will provide over-all policy direction for work by staff.

### 1.5.5.3 American River Basin Integrated Regional Water Management Plan (IRWMP)

Regional Water Authority (RWA), Freeport Regional Water Authority (FRWA), and Sacramento County Water Agency (SCWA), along with the various members and stakeholders, have developed the American River Basin (ARB) Integrated Regional Water Management Plan (IRWMP). The ARB region encompasses all of Sacramento County and most of Placer and El Dorado counties, except the areas in the Tahoe Basin, which are part of a separate planning area. An IRWMP is a comprehensive planning document prepared on a regional scale that identifies priority water resources projects and programs with multiple benefits. An IRWMP relies upon specific and focused local and sub-regional planning efforts for its foundation, and investigates a broad spectrum of water resource issues including water supply, flood management, water quality, environmental restoration, environmental justice, stakeholder involvement, and far-reaching community and statewide interests. A key difference in IRWMPs (as compared to other planning documents) is that IRWMPs integrate multiple water management strategies to solve multiple priority challenges.

The ARB IRWMP was adopted in May 2006. As projects/programs outlined in the IRWMP are implemented, the plan itself will be reviewed periodically to address changes, identify issues of

concern, and provide for additional study and analysis. New projects/programs will continue to be identified and incorporated. The participants designed the IRWMP as a living document that can be readily updated as the needs of the region change over time.

PCWA, Roseville, Lincoln, and CAW are involved in the ARB IRWMP through their participation in RWA.

### 1.5.5.4 Other Ongoing Groundwater Management Related Activities within the WPCGMP Area

In addition to the on-going programs by plan participants, there are several other on-going groundwater-related activities within the WPCGMP area. Coordination between these efforts and plan participants will be discussed in more detail later in this WPCGMP. The activities closely related to the plan participant's groundwater management efforts include, but are not limited to, the following:

- Monitoring of groundwater levels and quality by the California Department of Water Resources (DWR).
- Monitoring of groundwater quality by the U.S. Geological Survey (USGS) as part of its National Groundwater Ambient Monitoring Assessment (GAMA) Program.
- Monitoring of site investigations and remediation efforts at known leaking underground storage tanks (LUSTs) coordinated by the CVRWQCB.
- Soil contamination investigation and remediation activities at miscellaneous sites in the WPCGMP area, including the Union Pacific Railroad Yard in Roseville, California and the Alpha Explosives Facility just north of Lincoln.

### 1.6 AUTHORITY TO PREPARE AND IMPLEMENT A WPCGMP

The authority of plan participants to manage this portion of the Sub-basin is provided through a memorandum of understanding (MOU). Council members and/or board of directors for Roseville, Lincoln, PCWA, and CAW elected to prepare this WPCGMP as one of the tools necessary to effectively manage the basin. These plan participants are preparing this WPCGMP consistent with the

provisions of CWC § 10750 et seq. as amended January 1, 2003. This document does not supersede the specific objectives and actions included in Lincoln's 2003 WPC-GMP, or otherwise infringe on the autonomy or authority of Roseville, Lincoln, PCWA or CAW, unless otherwise agreed upon as described in Section 4 of this document.

#### 1.7 WPCGMP COMPONENTS

The WPCGMP includes both required and voluntary components.

Table 1-3 lists these components and indicates the section(s) in which each component is addressed.

Table 1-3. Location of WPCGMP Components

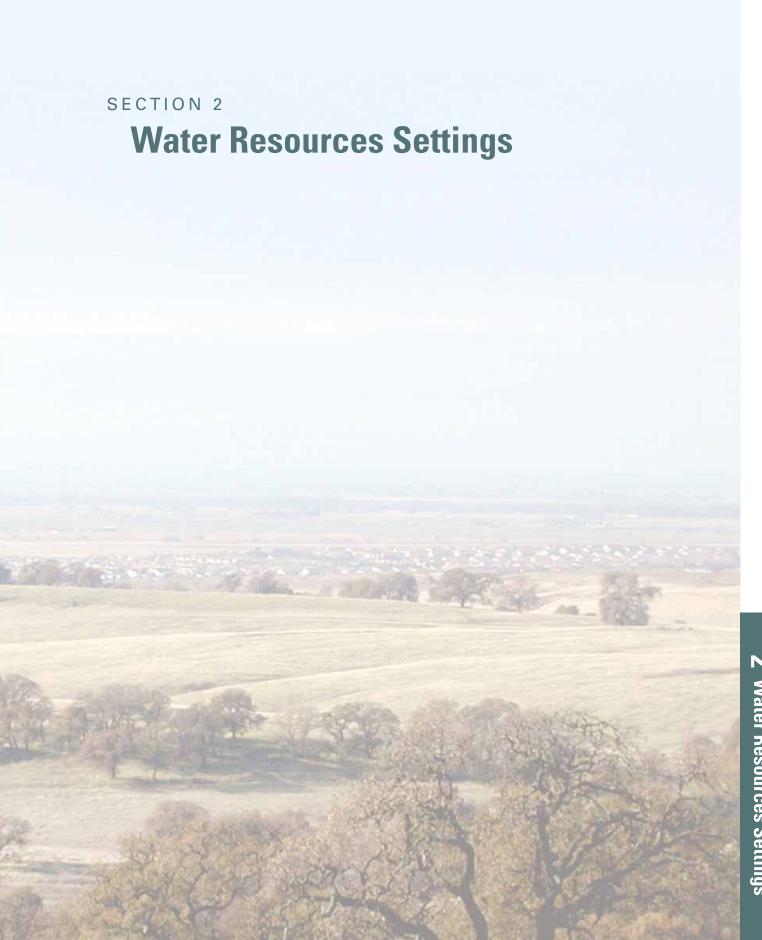
Description	Section(s)
A. CWC § 10750 et seq., Required Components (1)	
Documentation of public involvement statement.	3.5 & App. A
2. Basin Management Objectives (BMOs).	3.3
<ol> <li>Monitoring and management of groundwater elevations, groundwater quality, inelastic land surface subsidence, and changes in surface water flows and quality that directly affect groundwater levels or quality or are caused by pumping.</li> </ol>	3.6
4. Plan to involve other agencies located within groundwater basin.	3.5
5. Adoption of monitoring protocols by basin stakeholders.	3.6
Map of groundwater basin showing area of agency subject to GMP, other local agency boundaries, and groundwater basin boundary as defined in DWR Bulletin 118.	Fig. 1-3
7. For agencies not overlying groundwater basins, prepare GMP using appropriate geologic and hydrogeologic principles.	N/A
B. DWR's Recommended Components (2)	
Manage with guidance of advisory committee.	3.5.3
2. Describe area to be managed under GMP.	1 & 2
3. Create link between BMOs and goals and actions of GMP.	Table 3-1
4. Describe GMP monitoring program.	3.6
5. Describe integrated water management planning efforts.	1.5 & 3.9
6. Report on implementation of GMP.	4.1
7. Evaluate GMP periodically.	4.2
C. CWC § 10750 <i>et seq.</i> , Voluntary Components <sup>(3)</sup>	
Control of saline water intrusion.	3.7.6
2. Identification and management of wellhead protection areas and recharge areas.	3.7.3 & 3.7.4
3. Regulation of the migration of contaminated groundwater.	3.7.5
4. Administration of well abandonment and well destruction program.	3.7.2
5. Mitigation of conditions of overdraft.	3.8
6. Replenishment of groundwater extracted by water producers.	3.3
7. Monitoring of groundwater levels and storage.	3.6
8. Facilitating conjunctive use operations.	3.8.1
9. Identification of well construction policies.	3.7.1
Construction and operation by local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects.	2.3
11. Development of relationships with state and federal regulatory agencies.	3.5.4
12. Review of land use plans and coordination with land use planning agencies to assess activities that create reasonable risk of groundwater contamination.	3.9

<sup>(</sup>A) CWC § 10750 et seq. (seven required components). Recent amendments to the CWC § 10750 et seq. require GMPs to include several components to be eligible for the award of funds administered by DWR for the construction of groundwater projects or groundwater quality projects. These amendments to the CWC were included in Senate Bill 1938, effective January 1, 2003.

<sup>(</sup>B) DWR Bulletin 118 (2003) components (seven recommended components).

<sup>&</sup>lt;sup>(c)</sup> CWC § 10750 *et seq.* (12 voluntary components). CWC § 10750 *et seq.* includes 12 specific technical issues that could be addressed in GMPs to manage the basin optimally and protect against adverse conditions.

This page was left blank intentionally



### **Water Resources Setting**

This section describes the current understanding of surface and subsurface features of the WPCGMP area, which is located in the North American River Groundwater Sub-Basin (Sub-Basin) underlying western Placer County. Locations and classification of the different types of groundwater users within the Sub-Basin are shown in **Figure 2-1.** Within the WPCGMP boundaries, public retail water purveyors currently rely on a combination of groundwater and surface water. Groundwater and surface water supplies available for use within the Sub-Basin are briefly summarized below.

Roseville currently utilizes surface and recycled water. Surface water is treated at Roseville's Water Treatment Plan (WTP). However, Roseville plans to use groundwater in the future as a backup water supply source to meet daily and peak seasonal demands.

Lincoln primarily uses treated surface water delivered by PCWA, and relies on groundwater for emergency outages and as a backup water supply source during daily and peak demand periods. Lincoln also provides recycled water from its wastewater treatment recycling facility (WWTRF) for nearby agricultural uses, and is working on expanding the use of recycled water to include non-potable commercial, industrial, and public landscaping needs.

PCWA provides treated surface water for urban users and raw water for agricultural and irrigation and rural users to it's five service zones. PCWA also provides limited groundwater supplies to areas isolated from its surface water delivery system and as a backup supply to the Sunset Industrial Park.

CAW provides treated surface water, purchased from PCWA, for CAW's West Placer Service Area which includes the Dry Creek/West (Placer Vineyards) region, Dry Creek/East region, and a portion of the Curry Creek region. CAW currently does not use groundwater within the West Placer Service Area.



This subsection provides a description of general groundwater conditions including the groundwater basin, the geology/hydrogeology, groundwater elevation, and groundwater quality within the WPCGMP area.

#### 2.1.1 Groundwater Basin

This subsection provides a description of the underlying groundwater Sub-basin. The Sub-Basin is defined by DWR as the area bounded on the west by the Feather and Sacramento Rivers, on the north by the Bear River, on the south by the American River, and on the east by the Sierra Nevada Range (DWR, 2003). The Sub-basin is located within the Sacramento Valley Groundwater Basin. DWR Bulletin 118 (2003) provides additional information about the Sub-Basin on the agency's Web site<sup>1</sup> including:

- Surface Area: 548 square miles.
- The eastern Sub-basin boundary is a north-south line extending from the Bear River south to Folsom Reservoir. This represents the approximate edge of the alluvial basin where little or no groundwater flows into or out of the groundwater basin from the Sierra Nevada.



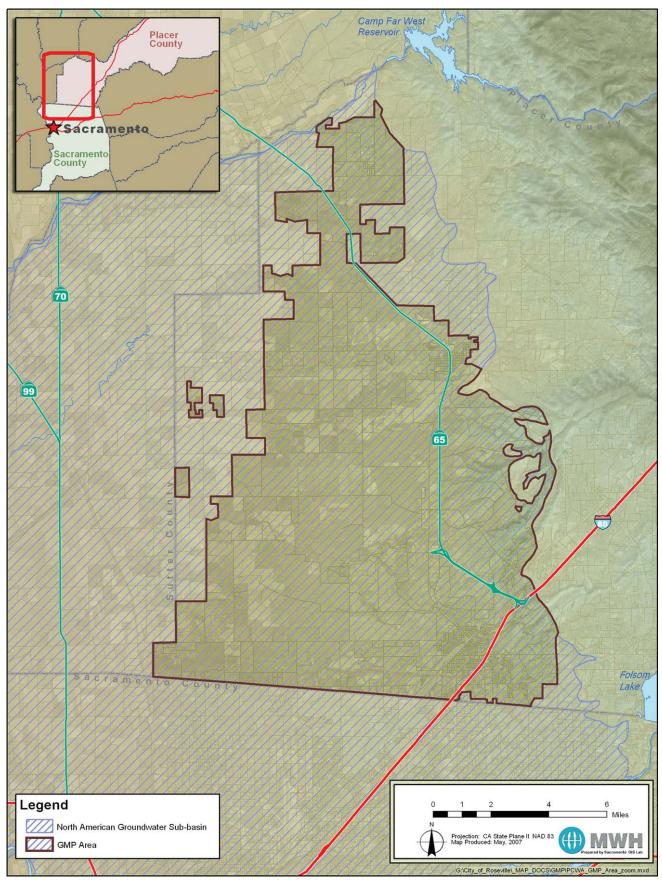


Figure 2-1 – North American Groundwater Subbasin and WPCGMP Area

 The western portion of the Sub-basin consists of nearly flat flood basin deposits from the Bear, Feather, Sacramento and American Rivers, and several small east side tributaries

#### 2.1.2 Geology/Hydrogeology

This subsection provides a regional description of the geologic and hydrogeologic conditions of the underlying groundwater Sub-basin. The California Geological Survey (CGS) and DWR identifies and describes the surface geology and various hydrogeologic formations that constitute the water-bearing deposits underlying the Sub-Basin, respectively.

#### 2.1.3 Hydrostratigraphy

The CGS mapped the surface geology of western Placer County as shown on **Figure 2-2.** Recent alluvial deposits comprise most of the western study area; chiefly clay and silt materials occur adjacent to the Sacramento and Feather Rivers (CGS, 1987 and 1992). These deposits are relatively impermeable. Typically, basin deposits are more coarse grained near to the foothills and therefore are more permeable. Modified from DWR Bulletin 118-3, the stratigraphic profile shown in **Figure 2-3** provides a conceptual representation of the basin's geologic formations and illustrates that the water bearing formations form a wedge that generally thickens from east to west to a maximum thickness of about 2,000 feet under the Sacramento and Feather Rivers (DWR, 1980 and 2003).

Per DWR Bulletin 118-3, the upper unconfined aquifer system consists of the Riverbank (formerly known as Victor) and Turlock Lake/Laguna (formerly known as Fair Oaks-Laguna) formations; the lower semi-confined aquifer system consists primarily of the Mehrten formation. These two systems constitute the major water

producing aquifers in the region. They are composed of lenses of sand, silt, and clay, inter-bedded with coarse-grained stream channel deposits that store water.

The degree of confinement typically increases with depth below the ground surface. However, due to the heterogeneous nature



of the alluvial depositional system, semi-confined conditions can be encountered at shallow depths in the aquifer. At approximately 1,000 to 1,500 feet depth, lies the base of fresh water. Below this boundary lies water originating from marine sediments where total dissolved solids levels (salinity) are too high to be used as a reliable municipal water source. There is no regionally confined

#### Lincoln Hydrogeology - Seismic and Downhole Geophysical Survey Understanding

Lincoln, as a result of several extensive investigations initiated in 1997, using seismic surveys and downhole geophysical tools, has gained a substantial understanding of the portion of the basin underlying Lincoln's SOI (<u>Saracino, Kirby, and Snow. 2003</u>). As an example of information gained, the following is a summary of survey results for five monitoring wells drilled in the winter of 2004.

- Most of the flow capacity (predicted production) is estimated to occur in relatively few discrete aquifer zones that make up a small percentage of the total depth section intersected by each well.
- 2. The relative flow profile indicates the existence of thin zones that are significantly more productive than the remainder of the depth section. These thin zones have a disproportionately large contribution to the overall well flow capacity representing depth-specific, highly transmissive "freeways" for groundwater to flow. The large variability of the estimated discrete depth flow capacity attests to the heterogeneous nature of the geologic material in this area mostly alluvial sediments.
- 3. An example of a monitoring well in the most productive aquifer zone is across the interval 278 to 353 ft below ground surface (bgs), which is not in Mehrten Formation instead it is in a "clean," quartz-rich sand/gravel aquifer section that appears to be alluvial sediments pre-dating the deposition of the Mehrten Formation. The log derived estimated transmissivity for this zone is on the order of 100,000 gallons per day per foot (gpd/ft).
- 4. The primary aquifer zones intersected in the four wells appear to be fairly well confined, based on the presence of low permeability zones that directly overlie and underlie the aquifer zones.
- The estimate of formation ground water salinity indicates no aquifer zones have salinity greater than 500 ppm, mostly less than 300 ppm, although some low permeability, nonaquifer zones appear to have higher ground water salinity.

aquifer system such as that created in the San Joaquin Valley by the Corcoran Clay layer due to the lack of extensive fine grained layers in the subsurface of the Study Area.

#### 2.1.4 Recharge and Extraction of Groundwater

Evaluating changes in aquifer conditions requires an understanding of the dynamic processes and interactions that are taking place as extractions and recharge of the aquifer occur. Conceptual models of the aquifer that describe induced recharge, aquifer storage, and

<sup>&</sup>lt;sup>1</sup> At: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/5-21.64\_North\_American.pdf.

differences between localized and regional effects on the aquifer are discussed below. These conceptual models are meant to clarify concepts; not all aspects of groundwater hydraulics are described. These models only apply to the Sub-Basin and adjoining sub-basins within Sacramento and western Placer Counties.

**Recharge.** Groundwater in the Sub-Basin moves from sources of recharge to areas of discharge. Recharge to the Sub-basin system occurs along active river and stream channels where extensive sand and gravel deposits exist, particularly along the Feather, Bear, American, and Sacramento River channels. Additional recharge occurs along the eastern boundary of the Sub-Basin within western Placer County at the transition point from the consolidated rocks of the Sierra Nevada to the alluvial deposited basin sediments (where the semi-confined Mehrten formation is exposed at the ground surface). This typically occurs through fractured granitic and metavolcanic rock that makes up the Sierra Nevada foothills. Other sources of recharge within the area include deep percolation

associated with applied irrigation water and precipitation, as well as from smaller streams that bi-sect the region (i.e. Auburn Ravine and Coon Creek).

Changes in the groundwater surface elevation (or potentiometric surface) result from changes in groundwater recharge, discharge, or extraction. In some instances, this change in groundwater elevation can induce natural recharge at locations where rivers or streams and the aquifer are hydraulically connected. To the extent that a hydraulic connection exists, as groundwater conditions change, the slope or gradient of the groundwater surface may change as well. A steeper gradient away from the stream would induce higher recharge from surface water into the aquifer.

The rate of recharge from streams that are hydraulically disconnected from the groundwater surface is indifferent to changes in groundwater elevations or gradient. This is typically true with smaller streams where the groundwater surface is located far below the streambed. In such cases, surface water percolates

### Roseville Hydrogeology - Aquifer Storage and Recovery (ASR) Program Exploratory Borehole, Monitoring Well, and Production Well Finding

From 2002-2006, Roseville installed 4 production wells and 4 monitoring wells in the northwest portion of the city limits as part of its Aquifer Storage and Recovery (ASR) program. To support the ASR program, Roseville initiated the collection of a comprehensive set of hydrogeologic data at these wells; including lithologic, geophysics, well pump tests, and groundwater elevation and quality. This data was collected and/or analyzed by multiple ASR program partners including; the City of Roseville, the U.S. Geological Survey, Lawrence Livermore National Laboratory, Department of Water Resources, Schlumberger Water Services, and MWH. Much of this data has been fully documented in well construction and/or ASR testing reports. A general summary of some of these findings is provided in the following paragraphs.

Borehole drilling, lithologic characterization and geophysical logging was conducted to depths of approximately 500-700 feet below ground surface (bgs), depending on the well location. Based on this data, the top of the targeted aquifer zone (Mehrten Formation) was found at depths ranging from approximately 300 to 525 feet bgs with a thickness ranging from approximately 100-200 feet. At each location, the Mehrten Formation was identified by the presence of dark colored, volcanic deposits commonly referred to as "black sands" (DWR, 1974). However, soil cuttings collected from the Mehrten Formation at each well show that grain size varies significantly

from one location to another. At two locations, the largest grain sizes were course sands, while at two other locations large gravels and cobbles were encountered. In all cases, however, layers of sands and gravels within the Mehrten Formation were interbedded with layers of silts and clays with varying thicknesses. Lastly, the presence of thick clay layers above and below the Mehrten Formation in nearly all wells suggests that the Mehrten Formation is fairly well-confined.

The results of production well pumping tests revealed very high production rates of 1,800 to 3,500 gallons per minute (gpm), with specific capacities ranging from 20-75 gallons per foot (gal/ft). Groundwater flow profiling tests performed at several of the wells suggests that the majority of groundwater pumped at each well is produced from a few relatively thin (5-10 feet thick), highly productive zones within the Mehrten Formation.

Overall, water quality within the Mehrten Formation was found to be excellent, with all constituents meeting maximum contaminant levels (MCLs) for drinking water. The one exception was at a monitoring well located towards the western boundary of Roseville where iron, manganese and TDS were found at levels exceeding the MCL. Here, the Mehrten Formation is located approximately 550-700 ft bgs. At this location, the production well was screened to draw groundwater above the Mehrten Formation (at the bottom of the Laguna Formation) where better water quality was observed.

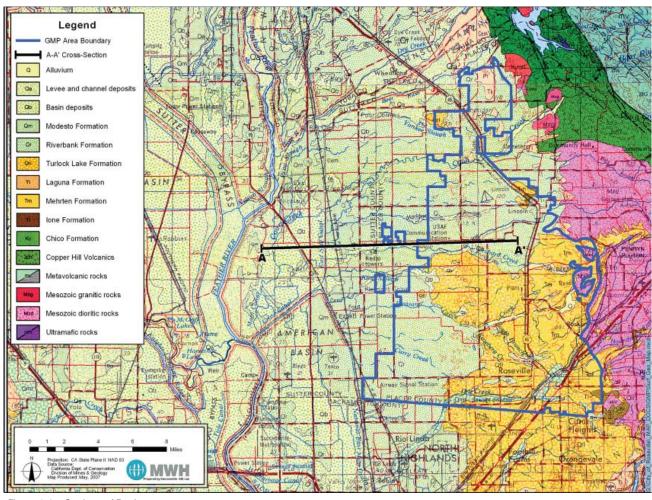


Figure 2-2 – Geology of Region

through the unsaturated zone to the groundwater and its rate is a function of the aquifer materials underlying the streambed and the water level in the surface stream. The rate of infiltration under these condi-



tions is not controlled by the change in elevation of the underlying groundwater. In the case of larger rivers, the American and Sacramento Rivers are considered to be hydraulically connected. This WPCGMP recognizes the importance of maintaining hydraulic connections with the larger river sources for sustainability of the groundwater supply and the environmental benefits of keeping water flowing in the riverbed.

**Localized Impacts of Groundwater Extraction.** When extractions occur from a single well, a localized cone of depression is formed around the well. The shape and depth of the cone of depression depends on several factors including, but not limited

to: (1) the rate of extraction; (2) the presence of nearby sources of recharge and/or extraction;, (3) aquifer transmissivity; (4) natural impervious barriers or earthquake faults; and (5) the "confined" or "unconfined" state of the aquifer, (i.e., storage coefficient). Over time, extraction from an unconfined aquifer can de-water the aquifer around the well. However, when extraction ceases, the water level within the aquifer typically rebounds to its pre-extraction condition.

A confined or semi-confined aquifer behaves differently since the water is under pressure from a recharge source. Instead of de-watering the aquifer, a change in confining pressure occurs as a result of extractions; the aquifer remains saturated. In a confined aquifer, the pressure or piezometric surface elevation decline is more dramatic than in an unconfined aquifer; however, the recovery to pre-extraction conditions is typically much faster.

**Regional Impacts of Groundwater Extraction.** Large regional cones of depression can form in areas where multiple groundwater extraction wells are in operation. The location and shape of a regional cone of depression is influenced by the same factors as a single well. A regional cone of depression within western Placer County and a larger cone of depression within Sacramento County

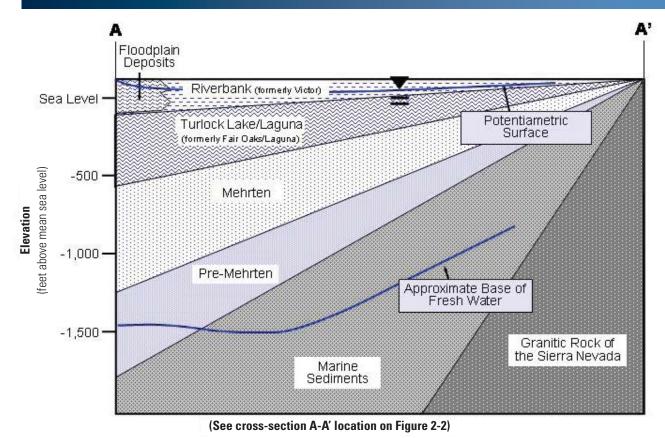


Figure 2-3 – Stratigraphic Profile

is shown on **Figure 2-4**. This map was prepared using water elevation data from DWR's water data library available on-line at: http://wdl.water.ca.gov. The map contours were determined using the Inverse Distance to a Power method.

The Inverse Distance to a Power gridding method was used to contour the water elevation data posted on **Figure 2-4.** This contouring method is a weighted average interpolator and is best used when there is a uniform distribution of data. With Inverse Distance to a Power, data are weighted during interpolation such that the influence of one point relative to another declines with distance from the grid node. Normally, Inverse Distance to a Power behaves as an exact interpolator. When calculating a grid node, the weights assigned to the data points are fractions, and the sum of all the weights is equal to 1.0.

Fluctuations in regional cones of depression are measured over years and result from: changes in recharge, and changes in extractions from increasing and decreasing water demands. For example, a sequence of successive dry years can decrease the amount of natural recharge to the aquifer. If this is coupled with a coinciding increase in groundwater extraction, an imbalance is created between natural recharge and extractions. Consequently, groundwater elevations would decrease in response to this imbalance. Over time, the shape and location of the aquifer's regional cone of depression fluctuates.

Intensive use of the groundwater basin has resulted in a general lowering of groundwater elevations near the center of the Subbasin away from the sources of recharge as shown in **Figure 2-4.** 

Spring 2006 Groundwater Elevation Contours. Provided within this subsection is an evaluation of a groundwater elevation contour map for the entire Sub-Basin during spring<sup>2</sup> of 2006 based on DWR information. Spring groundwater elevations are generally about 10 to 20 feet higher than during the fall season. This is because during the spring, the basin has been replenished by winter rainfall and less intensive agricultural activities in winter while prolonged dry season and extensive pumping reduces groundwater storage and lowers groundwater elevations leading to a seasonal cone of depression in the fall months, which is later recovered to some extent in the following spring. For example, during spring 2006 groundwater elevations ranged from 80 feet mean sea level (msl) along the foothills to -30 feet msl in the central portion of Sacramento County and -20 feet msl in the southern portion of Placer-Sutter County.

A regional cone of depression persists in the northern Sacramento and southern Placer-Sutter County area, respectively. Generally groundwater elevations are significantly higher on the eastern edge of the Sub-basin near the Sierra Nevada foothills, and lower on the western edge of the groundwater Sub-basin mimicking surface elevations.

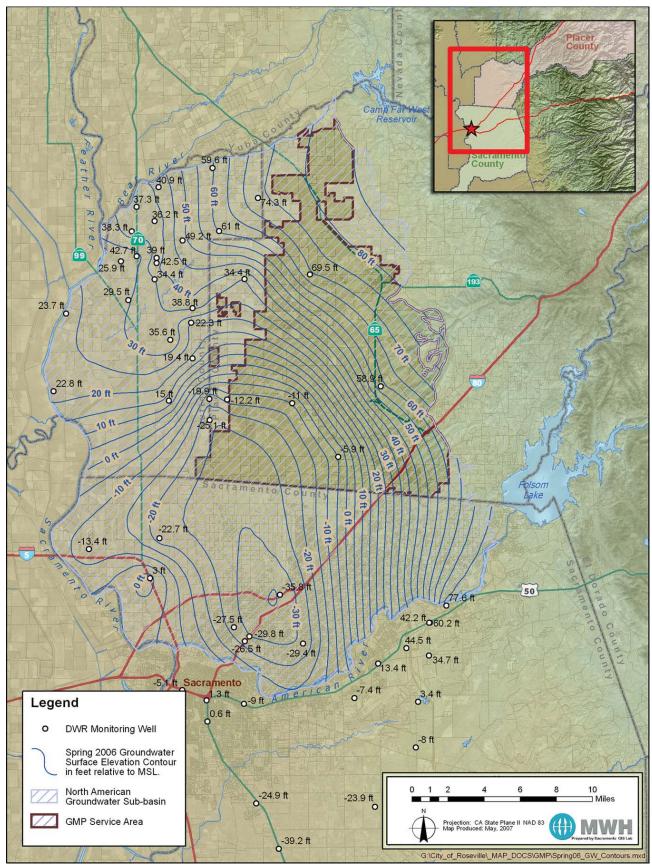


Figure 2-4 – Groundwater Elevation Map

#### 2.1.5 Groundwater Elevation Trends

Groundwater elevation hydrographs for 13 representative wells in the Sub-basin are shown on **Figure 2-5.** Wells closest to Sacramento County experienced declines in groundwater elevations from the late 1940s (earliest measurements) to approximately 1980. Such declines can be primarily attributed to meeting urban and agricultural water demands from groundwater pumping. After 1980, wells 10N05E08L002 and 10N05E12D001 appear to have stabilized. Well 10N06E10C001, located at the edge of Roseville, continued to experience declining groundwater

elevation until 1997 when the elevation drop was approximately 65 feet from its 1947 level. All three of these wells now exhibit stabilized groundwater elevations implying that the basin is in a state of equilibrium.

Specifically for Lincoln, DWR documentation was reviewed during preparation of their 2003 GMP to determine if DWR has identified the portion of the groundwater basin underlying the City to be in a state of overdraft, or if any DWR documentation has projected overdraft within the Lincoln Sphere of Influence (SOI). The following DWR documents were reviewed for this analysis: Bulletin 118-80 (DWR, 1980), Bulletin 118-3 (DWR, 1974), Bulletin 118-6 (DWR, 1978), and the draft basin description for the Bulletin 118 Update (DWR, 2002a). Additional historical groundwater elevation data collected by DWR was reviewed for wells in Lincoln's designated SOI.

Generally, the documents reviewed describe conditions of overdraft in southwestern Placer County and northern Sacramento County, as shown in **Figure 2-4**, located to the southwest of Lincoln. Groundwater elevations directly underlying Lincoln, however, were not described to be in a long-term state of decline. Therefore, the groundwater elevation data contained in those reports, as well as nearly 20 years of data at various sites around Lincoln, further support the conclusion of this WPCGMP that indicate groundwater elevations are not significantly declining within the vicinity of Lincoln.

For wells along the Placer-Sutter County border, the further the distance from Sacramento County line to the north, the higher the groundwater elevations, ranging from about -20 msl at well 11N05E18R001 to about 50 feet msl at well 13N04E23A002. These groundwater elevations varied with the year-to-year hydrologic conditions, but no obvious long-term trend over the most recent 10 years appears to be present.

For wells about one mile from the Bear River, or along the northern boundary of the WPCGMP area, groundwater elevations are relatively stable. The groundwater elevations increase in wells located further upstream toward the Sierra Nevada foothills, from



about 30 feet msl for well 13N04E29A002 to nearly 75 feet msl for well 13N05E03J001.

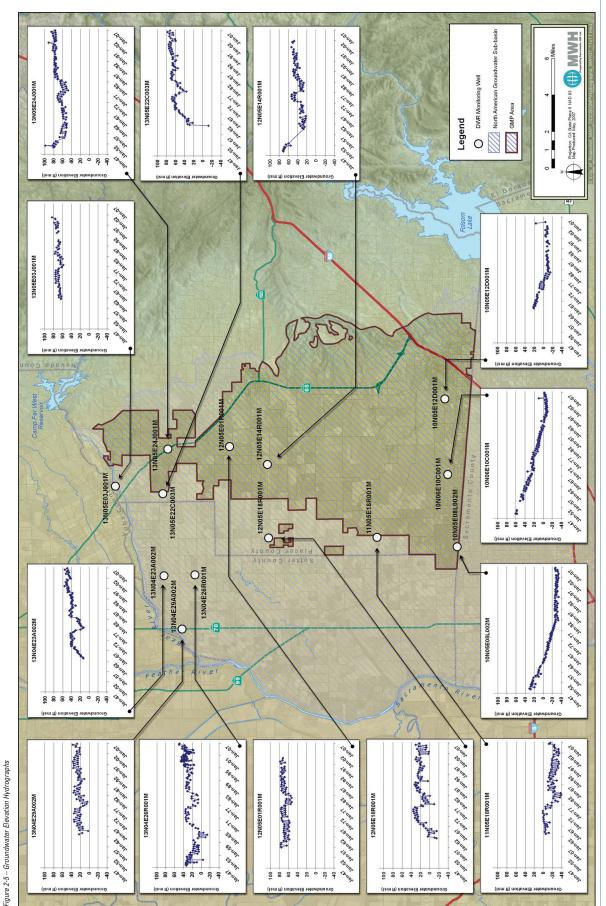
For the remaining wells in **Figure 2-5**, for example in the northeastern quadrant of the WPCGMP area, groundwater elevations are relatively stable or have small persistent increases in groundwater elevations over the last 15 years of record. Their elevations range from 30 to 60 feet msl (wells 12N05E14R001, 13N05E24J001, and 13N05E22C003).

From 1995 to 2005, groundwater elevations were maintained and the declining elevation trend was dampened. Such stabilization was in part due to groundwater management activities stemming from the WFA restraining further increases in groundwater pumping and implementation by Sacramento Suburban Water District of an in-lieu recharge program by reducing groundwater pumping when excess surface water through the San Juan Water District treatment and conveyance system existed. The supply of surface water stems from the regional cooperation between PCWA and a group of northern Sacramento County water purveyors to permit the use of up to 29,500 AF/year of Middle Fork Project (MFP) surface water for interim use in the northern Sacramento County region.

#### 2.1.6 Groundwater Quality

The groundwater quality in the upper aquifer system is regarded as superior to that of the lower aquifer system. The upper aquifer is preferred over the lower aquifer principally because the lower aquifer system (specifically the pre-Mehrten formation) contains higher concentrations of iron and manganese, and in some cases arsenic. Water from the upper aquifer generally does not require treatment (other than disinfection). The lower aquifer system also has higher concentrations of total dissolved solids (TDS, a measure of salinity) than the upper aquifer, although it typically meets standards as a potable water supply. In general, at depths of approximately 1,200 feet or greater (actual depth varies throughout the basin), the TDS concentration can exceed 2,000 milligrams per liter (mg/L). At such concentrations, the groundwater is considered non-potable without treatment.

<sup>&</sup>lt;sup>2</sup> Spring data are based on field measuring from April through June.



This page was left blank intentionally



**Background Water Quality.** The chemistry and quality of groundwater for the Sub-Basin has been described in detail in the DWR Feasibility Report, American Basin Conjunctive Use Project, June 1997. A comparison of groundwater quality data with applicable water quality standards and guidelines for drinking and irrigation indicate elevated levels of TDS, specific conductance, chloride, sodium, bicarbonate, boron, fluoride, nitrate, iron, manganese, and arsenic in some locations of the Sub-basin (DWR, 1997).

**Total Dissolved Solids.** The Secondary (aesthetic) Maximum Contaminant Level (MCL) concentration for TDS is 500 mg/L. A review of readily available data (described in the following paragraphs) indicate that TDS concentrations in groundwater are below the MCL throughout much of the region, therefore TDS concentrations should not limit the potable use of groundwater by the overlying agencies.

Regionally high TDS levels exist in the WPCGMP area along the Sacramento River extending from the Sacramento International Airport northward to Bear River. The highest levels of TDS can be found in an area extending just south of Nicholas to Verona, between Reclamation District 1001 and the Sutter Bypass. Some wells in this area have had TDS exceeding 1,000 mg/L (DWR, 1997). Specifically concentrations of TDS in excess of 7,000 mg/l have been reported in a DWR monitoring well located 2 miles east of Nicholas.

This DWR well (AB-1-deep), is screened to sample groundwater at depths of 950-970 feet bgs. This well was intentionally completed at this depth to observe the groundwater quality below the base of fresh water in this portion of the WPCGMP area. In addition, historic groundwater quality data collected from wells located throughout much of Placer and northern Sacramento counties show TDS levels ranging from 160-336 mg/L, with the average concentration being 228 mg/L (USGS, 2001a). These data generally represent groundwater quality at depths less than 600 feet bgs.

Locally TDS data has been collected by Roseville and Lincoln in their respective groundwater production wells. TDS concentrations in Lincoln production wells range between 230 and 330 mg/L

(Lincoln, 2003). TDS concentrations in Roseville production wells range between 230 and 470 mg/L (Roseville, 2005).

**Iron and Manganese.** The Secondary MCLs for iron and manganese is 0.3 and 0.05 mg/L, respectively. A review of readily available data (described in the following paragraphs) indicates that iron and manganese concentrations in groundwater exceed the MCLs in parts of the region, possibly limiting the potable use of groundwater by the overlying agencies or, at least, requiring treatment of the groundwater prior to use.

Concentrations of iron in groundwater from several wells near the Sacramento International Airport exceed the Secondary MCL and elevated concentrations were also noted in DWR monitoring well AB-1-deep (DWR, 1997). Manganese has also been reported at elevated concentra-

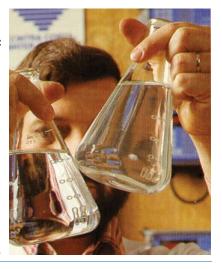
tions in the western portion of the WPCGMP area, within several wells located along the Sacramento River at reported concentrations exceeding 0.20 mg/L (DWR, 1997). Historic groundwater quality data in the region show iron concentrations ranging from 0.003-0.048 mg/L, with an average concentration of 0.012 mg/L, and manganese concentrations ranging from 0.0009 to 0.090 mg/L with an average concentration of 0.009 mg/L (USGS, 2001a). These data generally represent groundwater quality at depths less than 600 feet bgs.

Local iron and manganese groundwater quality data has been collected by Roseville and City of Lincoln in their respective groundwater production wells. Iron and manganese concentrations in City of Lincoln production wells range between non-detect and 1.8 mg/L and non-detect and 0.07 mg/L, respectively (Lincoln, 2003). Iron and manganese concentrations in Roseville production wells range between non-detect and 0.85 mg/L, and non-detect and 0.023 mg/L, respectively (Roseville, 2005).

**Arsenic.** The Primary MCL for arsenic is 0.010 mg/L, effective as of January 2006. A review of readily available data indicates that arsenic is present in groundwater throughout many areas of the region, and in some places exceeding the MCL. Overall, the extent of areas where arsenic exceeds the MCLs in groundwater

is believed to be sporadic and isolated and, currently, arsenic concentrations in groundwater are not significantly affecting the use of groundwater as a potable water supply.

Arsenic concentrations were observed at low to moderate levels in wells in the southwestern portion of the WPCGMP area.



Arsenic concentrations in some wells in this area neared 0.050 mg/L. Historic groundwater quality data in the region show arsenic concentrations ranging from 0.001-0.018 mg/L, with an average concentration of 0.05 mg/L (USGS, 2001a). These data generally represent groundwater quality at depths less than 600 feet bgs.

Local arsenic groundwater quality data has been collected by Roseville and Lincoln in their respective groundwater production wells. Arsenic concentrations in Lincoln production wells range between non-detect and 4.8 mg/L (Lincoln, 2003). Arsenic concentrations in Roseville production wells range between non-detect and 0.0035 mg/L (Roseville, 2005).

**Nitrate.** The Primary MCL for nitrate is 45 mg/L. A review of readily available data indicate that concentrations of nitrate in groundwater is well below the MCL throughout the region, therefore nitrate should not limit the use of groundwater as a potable water supply for overlying agencies.

Historic groundwater quality data in the region show nitrate concentrations ranging from 0.06-16 mg/L, with an average concentration of 5.9 mg/L (USGS, 2001a). These data generally represent groundwater quality at depths less than 600 feet bgs.

Local nitrate groundwater quality data has been collected by Roseville and Lincoln in their respective groundwater production wells. Nitrate concentrations in Lincoln production wells range from 5 to 10 mg/L (Lincoln, 2005). Nitrate concentrations in Roseville production wells range from 0.8 to 21 mg/L (Roseville 2005).

**Known "Principal" Plumes/Contaminated Sites.** Principal groundwater plumes or contaminated sites are known to exist within the WPCGMP area as discussed below, and shown on Figure 2-6. There are approximately 350 leaking underground storage tank sites [Central Valley Regional Water Quality Control Board (CVRWQB), 2005] and 40 other spill (SL) sites (DTSC, 2005) within Placer County that may have resulted in soil and/or groundwater contamination, however most of those sites pose little or no threat to the WPCGMP area.

The summaries provided in this section are based on information from one or more of the following sources; the City of Lincoln Groundwater Management Plan [Saracino, Kirby and Snow (SKS), 2003], the Roseville Sanitary Landfill Semi-Annual Water Quality Monitoring Report (CH2M Hill, 2005), the California Department of Toxic Substances' Control (DTSC) Site Mitigation and Brownfield Reuse Program website (DTSC, 2005), the Leaking Underground Storage Tank Quarterly Report [Central Valley Regional Water Quality Control Board (CVRWQB), 2005] and the Region 9 Cleanup Sites in California website (USEPA, 2005).

#### Alpha Explosives

Alpha Explosives is a 23-acre site located approximately five (5) miles north-northwest of the Lincoln and about 1,500 feet north of Coon Creek (SKS, 2003). Nitrate and perchlorate concentrations exceed drinking water MCLs in local groundwater and are the primary constituents of concern (COC) at the site. In a 1999 report by

Anderson Consulting Group, it was reported that a plume of nitrate impacted groundwater extended approximately 600 feet north and south and 1,300 feet west of this site. Since 2002, Alpha Explosives, with State Water Resources Control Board (SWRCB) oversight, has been operating a pilot-scale study to evaluate the potential for using bioremediation to treat the soil and groundwater.

#### **Roseville Sanitary Landfill**

The Roseville Sanitary Landfill encompasses 115 acres near Galleria Boulevard and Berry Street in Roseville. The groundwater underneath the landfill is impacted by a variety of organic and inorganic constituents. Of primary concern are TCE, tetrachloroethene (PCE), carbon tetrachloride, vinyl chloride and other VOCs. A corrective action program was implemented in 1994-1995 that included the construction of an engineered landfill cover and implementation of a groundwater monitoring program. Since the landfill was capped in December 1995, COC concentrations in the groundwater have generally decreased. Groundwater in the vicinity of the landfill flows west-northwest.

#### **Union Pacific Railroad – Roseville Railyard**

The 640-acre Union Pacific Railroad site is located near Roseville Road and Vernon Street in Roseville. At this site, the Diesel Shop Operable Unit is responsible for locomotive maintenance and repair, and related structures, and has been active for more than

80 years. COCs in the shallow groundwater at this site are diesel fuel and chlorinated solvents. The primary COCs are total petroleum hydrocarbons (TPH), with smaller amounts



of VOCs, semi-volatile organic compounds (SVOC) and lead. Contamination is mostly limited to the upper aquifer, although small amounts of PCE have been detected in the lower aquifer zone (150-160 feet bgs). It is not know if this site is the source of the PCE in the lower aquifer.

The Remedial Action Plan (RAP) for portions of the site was approved in 2003 and includes groundwater monitoring for COCs and natural attenuation. A RAP for the North Area of the site was approved in 2001 and includes groundwater extraction. The extracted groundwater is treated with an air stripper and on-site industrial wastewater treatment plant.

#### **Deluxe Cleaners**

Deluxe Cleaners is a former dry cleaning facility located on Vernon Street in Roseville. A preliminary assessment conducted in 1991 resulted in a No Further Action declaration under CERCLA. How-

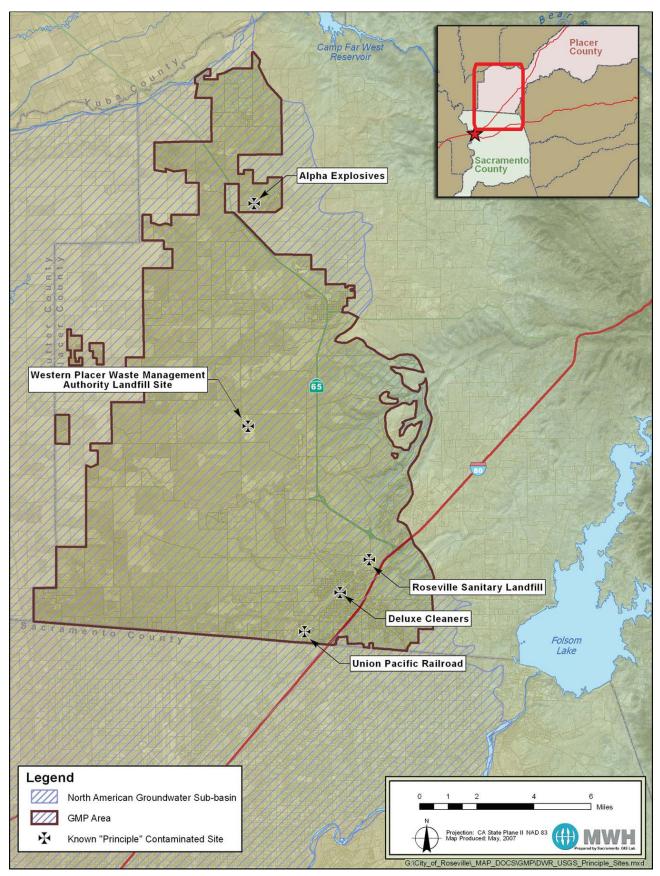


Figure 2-6 – Principle Contamination Sites

ever, since then high levels of TCE and PCE have been detected in the soil and groundwater underneath the site. In addition, TCE, PCE, and chloroform were detected in an emergency municipal well approximately 0.25 miles away from the site. As of 2004, the CVRWQCB had resumed investigations at the site.

### Western Placer Waste Management Authority Landfill Site (WPWMALS)

WPWMALS is an active landfill at the southeast corner of Athens and Fiddyment Roads within Placer County. The members of the WPWMA are City of Lincoln, City of Rocklin, City of Roseville, and County of Placer. A recent water quality analysis report indicates degradation of groundwater, first identified in 1995 with a corrective action plan approved by the RWQCB in 1997, continuing, and identifies constituents of concerns in the on-site monitoring wells.

#### **Other Sites**

There are approximately 350 leaking underground storage tank sites (CVRWQB, 2005) and 40 other spill (SL) sites (DTSC, 2005) within Placer County that may have resulted in soil and/or ground-water contamination, however most of those sites pose little or no threat to the WPCGMP area as they are small in scale and not considered "principal".

#### 2.2 SURFACE WATER CONDITIONS

This section provides a summary description of surface water conditions of the major rivers and streams within the, or of importance, to the WPCGMP area.

#### 2.2.1 American River

The American River drainage basin encompasses approximately 1,900 square miles. Folsom Reservoir is the principal reservoir in the basin with a storage capacity of 975,000 AF. Several smaller upstream reservoirs contribute another 820,000 AF of storage capacity. Nimbus Dam impounds Lake Natoma downstream of Folsom Dam and regulates releases from Folsom Reservoir to the lower American River. The entrance facilities to the Folsom South Canal are located along the south shore of Lake Natoma immediately upstream of Nimbus Dam. The mean annual flows in the lower American River is 3,300 cfs and the design capacity of the channel for flood flows is 115,000 cfs.

#### 2.2.2 Sacramento River

The Sacramento River drainage basin upstream of the WPC-GMP area encompasses approximately 23,500 square miles and produces an average annual runoff of about 17,000,000 AF as measured at the Freeport gauging station (below the confluence of the American River). Principal reservoirs controlling flows in the lower Sacramento River include Lake Shasta (4,522,100 AF), on the Sacramento river upstream of Redding, Trinity Lake (2,448,000 AF), which regulates deliveries made to the Sacramento from the Trinity River Basin, Lake Oroville (3,538,000 AF), and Folsom Reservoir (975,000 AF). Based on the 30-year record of data for the period 1968 through 1998, which spans a variety of water year types, individual monthly average flows have ranged from a low of 4,500



Confluence of Sacramento and American Rivers

cfs in October 1978 to a maximum of 87,000 cfs in January 1997. Overall the monthly flows of all 30 years range between 13,000 and 40,600 cfs, with the lowest flows occurring in October and peak flows in February. The 30-year average monthly flow during the wetter months of December through May is 32,200 cfs. During the typically drier months of June through November, the average monthly flow is 16,500 cfs.

#### 2.2.3 Feather River

The Feather River drains approximately 3,700 square miles starting at its confluence with the Sacramento River near Yuba City and expanding east and northeast to the western slopes of the Sierra Nevada. Oroville Dam is the primary reservoir on the river with a storage capacity of approximately 3,500,000 AF; the second largest reservoir is Lake Almanor (Canyon Dam) with a storage capacity of 1,300,000 AF. The total storage in the watershed is approximately 5,200,000 AF. Water level data recorded from 1968-1998 on the Lower Feather River shows average monthly streamflows ranging from 2,400 cfs in October to 8,200 cfs in January. The maximum average monthly streamflow was 40,700 cfs, recorded in January 1997.

#### 2.2.4 Bear River

The Bear River watershed encompasses approximately 292 square miles in Placer, Yuba and Sutter Counties. Camp Far West Reservoir is the principle reservoir on the river and has a storage capacity of approximately 104,000 AF, however two smaller impoundments (Lake Combie and Rollins Lake) exist in the upper watershed. Mean monthly flow rates, based on 76 years of data, range from approximately 1,200 cfs in February to 17 cfs in July. The highest mean monthly flow rate was 5,200 cfs in February 1986.

#### 2.2.5 Dry Creek

The Dry Creek watershed encompasses approximately 101 square miles in Placer and Sacramento Counties. The watershed in highly developed and the creek is subject to highly variable flows affected by runoff events. Mean monthly flow rates based on 1999-2004 data show that stream flows range from 228 cfs in February to

13 cfs in July. During the dry season, much of Dry Creek's flow is treated effluent from the Roseville/Dry Creek Wastewater Treatment Plant

#### 2.2.6 Auburn Ravine

The Auburn Ravine watershed drains approximately 79 square miles, originating north of the City of Auburn and ending at the confluence with the East Side Canal. The surrounding land use is generally urbanized in the upper reaches of the stream and rural in the lower reaches of the stream. During winter, the stream flows mostly originate as precipitation runoff or wastewater treatment plant discharges. In the summer, flows are provided by Yuba, Bear, and American River waters that are diverted to Auburn Ravine for irrigation deliveries, as well as wastewater treatment plant discharges. Peak winter flows are typically several hundred cfs and the average 100-year flow is estimated to be approximately 17,000 cfs. Annual flows are typically lowest in October, when irrigation demands decrease and rains are not yet adequate to supply sufficient flows.

#### 2.2.7 Coon Creek

The Coon Creek watershed drains an area that starts north and east of the City of Auburn and ends at its confluence with the East Side Canal. Coon Creek forms at the confluence of Orr Creek and Dry Creek west of Auburn. The watershed is urbanized in the upper basin near Auburn and Lincoln and rural on valley floor. Peak stream flows are typically several hundred cfs during the winter and the 100-year flow is estimated to be approximately 22,000 cfs. In the summer, upper basin flows are provided by diversions from the Bear River and lower basin flows (valley floor) are primarily agricultural return flows. Annual flows are typically lowest in October, when irrigation demands decrease and rains are not yet adequate to supply sufficient flows.

#### 2.3 SURFACE WATER QUALITY

The following subsection describes the surface water quality of the major rivers and streams within the, or of importance to the WPCGMP area.

#### 2.3.1 American River

Surface water quality in the American River is a function of the mass balance of water quality from tributary streams, diversions,

minor agricultural return flows, subsurface drainage flows, with other impacts resulting from permitted discharges from M&I sources, urban runoff and spills. In general, the quality of water in the American River is high from the river's



American River

headwaters to its confluence with the Sacramento River. It is low

in alkalinity, low in disinfection by-product precursor materials, low in mineral content, and low in organic contamination. Limited data also indicate that the water is low in microbial contamination from Giardia and Cryptosporidium. Turbidity levels in the American River tend to be higher in the winter than summer because of higher flows associated with winter storms.

#### 2.3.2 Sacramento River

Sacramento River water quality is largely influenced by a mass balance of water quality from upstream reservoir release operations, tributary flows (including the lower American River), agricultural runoff, subsurface drainage flows, and diversions, with other impacts resulting from permitted discharges from M&I sources, urban runoff and spills. In general, the quality of the Sacramento River is high in the vicinity of the WPCGMP area. There are moderate amounts of alkalinity and minerals and low levels of disinfection by-product precursors. Turbidity levels in the Sacramento River are higher during the winter and early spring months, usually associated with reservoir releases or runoff from storm events. There are very infrequent detections of organic chemicals, most of which are pesticides or herbicides from upstream agricultural operations. Data collected to date, indicate that there is a low prevalence of Giardia and Cryptosporidium in the river, with protozoa only detected sporadically and at very low concentrations.

The characterization of Sacramento River water quality in the vicinity of the North American River Sub-Basin is based on Sacramento River Watershed Sanitary Survey reports (Archibald and Wallberg, 1995 & Montgomery Watson, 2000).

#### 2.3.3 Feather River

Water quality in the Lower Feather River, downstream of Oroville Dam, is listed as a Section 303(d) impaired water quality segment. Diazinon, an organophosphorus insecticide, is the primary constituent of concern in the river. Mercury (from mining activities) and other pesticides are also present in the waters. The upper Feather River forks, upstream of Oroville Dam, generally suffer from elevated suspended sediment loads, especially during runoff events. The descriptions and summaries of the Feather River are partially based on the USGS's Water Quality in the Sacramento River report (Domagalski et. al., 2000).

#### 2.3.4 Bear River

Throughout the Bear River watershed, surface water quality is affected by upstream reservoir releases and diversions, and past mining activities. In the Lower Bear River basin, water quality is also impacted by agricultural runoff. The primary water quality concerns in Bear River stem from past mining activities, which have resulted in heavy metals such as mercury accumulating in the river sediment.

#### 2.3.5 Dry Creek

Surface water quality in Dry Creek is largely influenced by urban activities. During summer months, the water quality may closely resemble that of highly treated wastewater effluent as it provides a majority of the stream flow during that time. In the fall, water

quality likely contains trace metals, organic chemicals and other urban contaminants commonly found after the first rains of the season. The Dry Creek descriptions and water quality summaries are based upon information provided in the Dry Creek Watershed Coordinated Resource Management Plan (Placer County and Sacramento County, 2003).

#### 2.3.6 Auburn Ravine

Water quality in Auburn Ravine is affected by the quality of urban stormwater runoff, wastewater treatment plant discharges, failing septic systems along the ravine, and agricultural return flows, as well as the quantity of irrigation water, which acts to dilute these sources of constituent loading. Water quality analyses have revealed high concentrations of

heavy metals such as copper, lead and mercury. The source of these pollutants is primarily stormwater runoff, although wastewater treatment plant discharges are a significant source of copper and lead at times. Diazinon is the only pesticide detected in recent Auburn Ravine samples.



Coon Creek water quality is also influenced by urban stormwater runoff, wastewater treatment plant discharge, and agricultural return flows, as well as the quantity of irrigation water, which acts to dilute these sources of constituent loading. Analyses have shown that the water quality is most negatively affected by excess nutrients which result in depleted dissolved oxygen levels. The primary sources of the excess nutrients are wastewater treatment plant discharges and creek-side cattle grazing operations. Diazinon is the only pesticide detected in recent Coon Creek samples. The descriptions and water quality summaries of Auburn Ravine and Coon Creek are based on the Auburn Ravine/Coon Creek Ecosystem Restoration Plan (Placer County, 2002).

#### 2.4 WATER USE

This section provides a description of plan participant's water use. Current and future water demands and surface water supplies, groundwater supplies and recycled water supplies are presented. **Table 2-1** provides a summary of plan participant's urban water use in the WPCGMP area and **Figure 2-7** provides projected annual water demands

#### 2.4.1 ROSEVILLE

The following sections are a summary of Roseville's water use.

#### 2.4.1.1 Demands

In 2004, Roseville's total water demand was 32,612 AF. Roseville's projected water demand is expected to increase to 55,792 AF in 2025, which is shown in **Figure 2-7**.



Auburn Ravine Diversion

#### 2.4.1.2 Surface Water Supplies

**Existing Conditions.** Roseville currently has a surface water supplies of up to 66,000 AF/year diverted from Folsom Lake. These supplies include a 32,000 AF/year Central Valley Project (CVP) contract with the U.S. Bureau of Reclamation, a 10,000 AF/year contract with PCWA with 20,000 AF/year of options, and a 4,000 AF/year contract with SJWD which is available in Water Forum designated wet and normal years.

Proposed and existing Roseville and other plan participant water facilities are shown on **Figure 2-8**.

**Future Conditions.** Future considerations for Roseville include the improvements of its facilities to maximize the use of all of its surface water supplies.

#### 2.4.1.3 Groundwater

**Existing Conditions.** Currently, Roseville does not utilize groundwater, but is pursuing opportunities to use banked groundwater supplies for back up, and peak daily demands. Roseville has four groundwater production wells (Atlantic, Oakmont, Darling Way, and Diamond Creek), three of which are ready for aquifer storage and recovery (ASR) operations with one additional well (Woodcreek North) scheduled to be completed by summer 2008 (**Figure 2-8**). A summary of Roseville's and plan participant production municipal wells is presented on **Table 2-2**.

**Future Conditions.** Roseville is implementing conjunctive use projects including their ASR program at the Diamond Creek Well and evaluating the feasibility of direct and in-lieu groundwater recharge as part of the Dry Creek Recycled Water Groundwater Recharge Feasibility Study in an effort to maximize the yield of both their surface water and groundwater supplies.

#### 2.3.1.4 Recycled Water

**Existing Conditions.** Roseville owns and operates two regional waste water treatment plants (WWTP): Dry Creek and Pleasant Grove WWTP; both facilities provide full Title 22 (tertiary) treatment. Plant inflows are from within Roseville City limits, SJWD,

and part of PCWA Zone 1. Roseville owns and operates a recycled water distribution system for landscape irrigation within the city limits (Roseville, 2000). Delivered in ubiquitous purple pipes, the city delivered 2,045 acrefeet of recycled water in 2005.

**Future Conditions.** It is anticipated that Roseville will continue to expand its system to more fully utilize and

optimize recycled water supplies. Treated effluent that exceeds Roseville's recycled water demands could potentially be made available for in-lieu groundwater recharge purposes. The Dry Creek Recycled Water Groundwater Recharge Feasibility Study identifies and evaluates potential opportunities to recharge groundwater in Placer and Sacramento Counties through application of recycled water as described in Section 1.5.1.4.



#### 2.4.2 LINCOLN

The following sections provide a summary of Lincoln's water use.

#### 2.4.2.1 Demands

In 2004, Lincoln's total water demands were 7,539 acre-feet. With anticipated expansion of the city limits in the 2006 Draft General Plan EIR, demand is projected to reach 53,000 acre-feet (Environmental Science Associates (ESA), 2006).

#### 2.4.2.2 Surface Water

**Existing Conditions.** Lincoln is located in PCWA's Zone 1 service area. Surface water deliveries are purchased from PCWA, which are treated at the Sunset and Foothill Water Treatment Plants. In 2004, Lincoln purchased 7,241 acre-feet of surface water from PCWA. Lincoln also purchases raw water from Nevada Irrigation District (NID).

**Future Conditions.** Lincoln will primarily meet future demands with surface water from PCWA and NID. Recycled water and groundwater will also be used to supplement these primary sources.

Table 2-1. Urban Water Use in the WPCGMP Area

Water Purveyors	Surface Water Supply/Contract Amounts		Treated Water D	emand (AF/year)	Currently Groundwater	
			2004	Projected 2025	Pumping?	
PCWA	PG&E	100,400				
	MFP	65,000 <sup>(1)</sup>	00.005	70.004		
	CVP	35,000	38,035 (Zone 1 only) <sup>(2)</sup>	73,994 (Zone 1 and 5) <sup>(2)</sup>	No	
	Total	200,400	(Lone 1 only)	(Zone Tana o)		
City of Roseville	MFP transfer from PCWA	30,000			(4)	
	CVP	32,000	(3)	55,792 <sup>(3)</sup>		
	San Juan	4,000	32,612 <sup>(3)</sup>		No <sup>(4)</sup>	
	Total	66,000				
City of Lincoln	PCWA	34,000 <sup>(5)</sup>				
	NID	12,000 <sup>(5)</sup>	7,539 <sup>(6)</sup>	53,000(6)	Yes (7)	
	Total	46,000 <sup>(5)</sup>				
CAW West Placer Service Area	Total Treated Water Purchased from PCWA		0(8)	15,748 <sup>(9)</sup>	No	

mgd – million gallons per day WTP – water treatment plant PG&E - Pacific Gas & Electric CVP - Central Valley Project MFP- Middle Fork American River Project

- (2) Source: Placer County Water Agency 2005 Urban Water Management Plan
- (3) Source : City of Roseville 2005 Urban Water Management Plan
- (4) Roseville has three backup supply wells to meet potential peak demands only. These wells are equipped for aquifer storage and recovery. Additional wells may be operational by the end of 2008.
- (5) Source: City of Lincoln 2006 General Plan Update
- (6) Source: City of Lincoln 2005 Urban Water Management Plan. Volume includes recycled water supplies. Estimated through 2030.
- (7) City of Lincoln wells operate as backup and emergency supply and to manage daily peak demands (goal is to average 10% of annual demand)
- (8) Currently unknown value assumed to be zero
- (9) Total water demand for West Placer Service Area at build out (year 2020) based on demands provided in the Water System Comprehensive Planning Study (2006)

<sup>(1)</sup> PCWA's entitlement is equal to the total of the Middle Fork American River Project (MFP) entitlement (120,000 AF/year) less transfers to City of Roseville and San Juan Water District (30,000 and 25,000 AF/year, respectively). The temporary 29,000 AF/year of MFP transfer currently under contract to Sacramento Suburban Water District located in Sacramento County is included in the 120,000 AF/year amount.

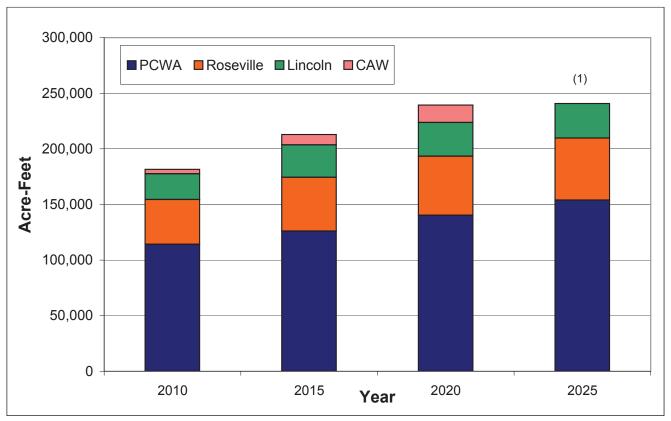


Figure 2-7 – Projected Water Demands (treated and raw water)

#### 2.4.2.3 Groundwater

**Existing Conditions.** The City utilizes groundwater from five wells to provide emergency, back up, and peaking supplies as a source for its backup water supply. Liquid chlorine (sodium hypochlorite) is added to the pumped groundwater at the well site for preventative disinfection. All well sites have 10,000-gallon pressure tanks. In 2004, Lincoln pumped 298 acre-feet of groundwater.

Future Conditions. The City has plans to increase the number of municipal water supply wells in order to increase water supply reliability, provide emergency supplies and help meet peak demand. Studies by Spectrum-Gasch (1999) and Boyle Engineering (1990) show that groundwater resources are available in the Lincoln area. The City is currently completing additional groundwater investigations. The results of these investigations will be analyzed and used to help determine optimal well spacing and pumping schedules. The City estimates additional wells will be built. Geologic logging, bore hole geophysical logging and aquifer stress tests have been and will continue to be conducted as the City expands its well capacity.

#### 2.4.2.4 Recycled Water

Lincoln recently completed a new Wastewater Treatment and Reclamation Facility (WWTRF) for the purpose of treating wastewater generated within the City.

**Existing Conditions.** The 3.3 MGD WWTRF began operation in 2004 and generated an initial 2.4 MGD of average dry weather flow with expansion capacity to 12 MGD. Flow is expected to increase to 6 MGD over the next 5 to 10 years. The WWTRF replaced the former Waste Water Treatment Plant, which is being decommissioned. Effluent from the WWTRF undergoes treatment processes that include oxidation, coagulation, clarification, filtration, and disinfection with ultraviolet light.

Recycled water from the WWTRF is currently used for irrigation on approximately 400 acres at three sites, including:

- Approximately 170 acres at West Placer Waste Management Authority (Lastufka) property, south of the WWTRF
- 2. 105 acres at Antonio Mountain Ranch, south of the WWTRF
- 3. 117 acres at the Warm Springs site, west of the WWTRF

During the non-irrigation season, effluent is stored for future use. Areas that currently receive recycled water are capable of using approximately 400 million gallons per year in normal precipitation conditions.

The WWTRF is capable of producing recycled water that meets DHS requirements in Title 22 for unrestricted reuse. Projects currently in design will allow construction of the necessary distribution system to deliver additional recycled water to users within the city limits by 2008. It is anticipated that these new users may

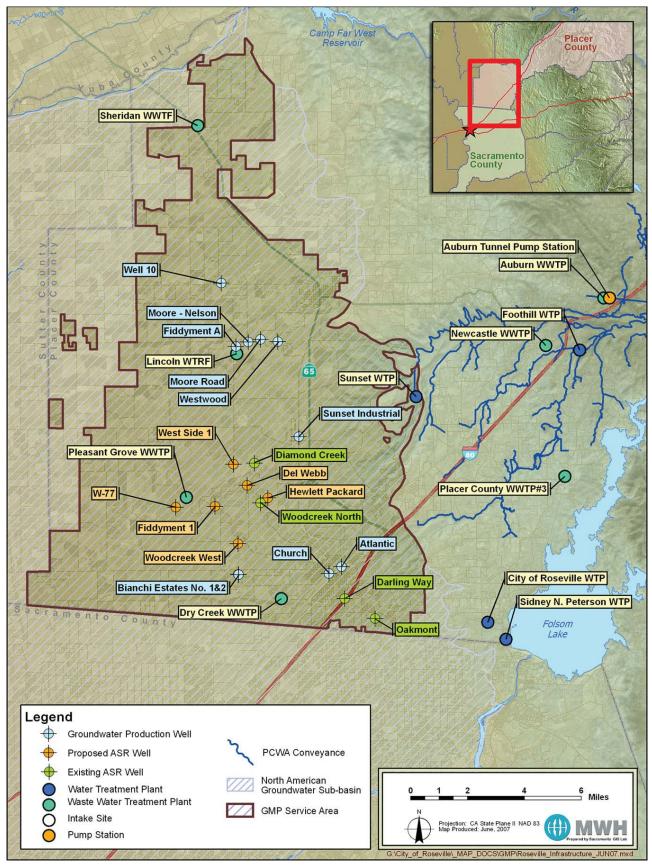


Figure 2-8 – Existing Roseville/Lincoln/PCWA/CAW Facilities

account for as much as 1,400 AF/year of recycled water by 2010 (including irrigation of the proposed Highway 65 Bypass right of way).

Effluent produced by the Lincoln WWTRF is of sufficient quality to allow unrestricted reuse, including the farming of salinity sensitive crops.

**Future Conditions.** Further, the City is in the process of updating its General Plan and new build-out wastewater flow projections are estimated to be approximately 22 to 24 MGD. The Placer Nevada Wastewater Authority (PNWA), comprised of western Placer and Nevada County public agency jurisdictions, is considering expansion of the Lincoln WWTRF as a regional wastewater treatment and reclamation facility. If implemented for this purpose, the total average wastewater flow at an expanded WWTRF could be as much as 32 MGD, at build-out.

The goal of the Lincoln reclamation project is to utilize all reclamation water produced by the WWTRF. The 2002 Reclamation Study competed during the planning phase for the WWTRF improvements revealed nearly 25,000 AF/year of potential industrial and agricultural demand for recycled water in the greater Lincoln area. Some of these users have been incorporated into the Reclamation Master Plan and others may be included in the future as wastewater flows to the WWTRF increase.

#### 2.4.3 PCWA

The following sections are a summary of PCWA's water use.

#### 2.3.3.1 Demands

Currently, PCWA provides treated drinking water for urban areas and raw water for agricultural irrigation and rural uses.

#### 2.4.3.1.1 Urban

Treated water customers include M&I entities primarily located within Zone 1. Urban water demands were approximately 28,000 AF in 2000. As part of PCWA's Water Systems Infrastructure Plan (WSIP), the 2005 treated water demand was projected to be approximately 35,000 AF. Projections suggest that treated water demand will increase to 81,380 AF by 2030 (PCWA, 2003). Existing M&I treated water customers receive water from four WTPs operated by PCWA (two are located in the Upper Zone 1 system and two are in the Lower Zone 1 service area). The four WTP's have a total treatment capacity of 78 MGD.

#### 2.4.3.1.2 Agricultural

Raw water customers generally obtain water service for irrigation, livestock, and, more recently, golf courses and other public land-scaped areas. Raw water customers obtain water service through a series of canals and waterways.

Table 2-2. Summary of Plan Participant Production Wells in the WPCGMP Area

Owner	Well Name	State Well ID	Installation Date	Pump Capacity (gpm)	Well Depth (ft bgs)	Boring Depth (ft bgs)	Well Diameter (in)	Operational Status
City of Roseville	Diamond Creek	11N06E17D003M	11/6/2002	2,700	460	502	20	Emergency M&I supply
	Woodcreek North	11N06E20	9/28/2006	2,000 (est.)	530	540	20	Estimated Pump Station Completion June 2008.
	Fiddyment 1		5/1/2006	1,800 (est.)	513	520	18	Not yet in service. Awaiting pump station construction
	W-77		4/1/2006	1,800 (est.)	526	531	18	Not yet in service. Awaiting pump station construction
	Atlantic St.		1947	800	290	290	14	Emergency M&I supply
	Church St.	10N06E02B01	1947	800	245	245	14	Emergency M&I supply
	Oakmont	10N07E18D	12/18/1977	2,000	356	370	16	Emergency M&I supply
	Darling Way	10N06E12M01	5/26/1958	1,000	303	304	14	Emergency M&I supply
City of Lincoln	Well 2		1984	950	275	285	14 (to 120 ft) 6 (120 to 274 ft)	Out of service. 6" well screen installed in 1990. Equipment modifications to be completed 2006 will increase pump capacity to 950 gpm.
	Well 4		7/14/1990	500	320	320	16 (to 280 ft) 8 (278 to 320 ft)	Out of service. Originally drilled to 290 and constructed to 284 ft. Well deepened to 320 and 8" screen installed below 280 ft. Excessive sand in the discharge. To be replaced by Well 10.
	Well 6 (Westwood)	12N06E28		800			16	Operational
	Well 7 (Moore Road)	12N06E20	9/27/2001	1,000	300	309	16	Operational
	Well 8 (Fiddyment A)	12N06E30	9/1/2004	1,400	317	347	16	Operational
	Well 9 (Moore-Nelson)	12N06E29		1,800	340	350	16	Not yet in service. Pump station construction in progress.
	Well 10							Currently in design, Scheduled for construction in 2006.
	Bianchi Estates #11	10N06E05L03M	9/24/1979	550	400		12	Emergency M&I supply
PCWA	Bianchi Estates #21	10N06E05L04M	10/12/1979	500	335		12	Emergency M&I supply
	Sunset Industrial	11N06E09H01M	Aug-64	800	198		14	Emergency M&I supply

<sup>&</sup>lt;sup>1</sup> Supply has been replaced with surface water (2003)

<sup>- -</sup> Information Not Available

Agricultural water demand in the WPCGMP area is equal to the summation of the product of irrigation demand and cropped area for each crop or use type. This demand changes with time given the hydrologic wet/dry conditions, and the amount of evapotranspiration that occurs with each crop or use type that can be accounted for on a daily basis. PCWA estimates the Zone 5 agricultural demand in 2030 to be 70,000 acre-feet.

#### 2.4.3.2 Surface Water

**Existing Conditions.** PCWA's surface water entitlements include: water purchased from Pacific Gas and Electric Company (PG&E) from its Drum-Spaulding Project (100,400 AF/year), MFP water (120,000 AF/year), and CVP contract water (35,000 AF/year). PCWA has transfer agreements<sup>3</sup> with Roseville, San Juan Water District, and Sacramento Suburban Water District for 30,000, 25,000, and 29,000 AF/ year of MFP water, respectively. PG&E water, which has been fully utilized, is diverted along PG&E canals at various diversion points. MFP water is diverted at the American River Pump Station (ARPS) near the Auburn Dam site, downstream of the confluence of the North and Middle Fork of the American River. PCWA currently does not have facilities to exercise its CVP entitlement; the authorized point of diversion of which is at Folsom Lake. Contract entitlement amounts described above are for normal and wet conditions; under dry and critical conditions, PCWA water supplies are subject to curtailment, and alternative water supplies or cutbacks in raw water deliveries will be necessary to meet demands.

PCWA also shares raw water canal capacity with NID and South Sutter Water District. Through interim purchase agreements, PCWA has obtained temporary water supplies from these agencies, purchasing a few thousand acre-feet per year on a case-by-case basis in the recent past. However, these purchases are not considered permanent water supplies.

**Future Conditions.** To meet its future demands PCWA will continue to rely on surface water, groundwater, and recycled water.

#### 2.4.3.3 Groundwater

**Existing Conditions.** Currently PCWA does not pump groundwater to an appreciable extent. Groundwater can be pumped at the Sunset Industrial Park as a backup supply, however, elevated levels of silica make this practice a 'last resort' situation. Also, isolated portions of the Martis Valley (outside the WPCGMP area) are served by small amounts of groundwater to meet local needs.

Most of the agricultural pumping is met by self-supplied ground-water in PCWA's Zone 5.

**Future Conditions.** PCWA is evaluating conjunctive use projects including PCWA's Western Placer County Groundwater Storage Study to possibly develop alternatives for increasing groundwater recharge and storage with conjunctive use operations in western Placer County. This study is described in further detail in Section



PCWA Canal

1.5.3.2. PCWA as part of its water connection charge projects has developed a groundwater supply program to serve at times of emergencies, backup to the surface water system and peaking.

#### 2.4.3.4 Recycled Water

**Existing Conditions.** PCWA currently does not own or operate wastewater treatment or recycled water distribution facilities. Only the cities of Auburn, Lincoln, and Roseville have their own WWTP for their respective city limits; the remaining Zone 1 wastewater goes to the two regional WWTPs located in Roseville.

**Future Conditions.** In the future PCWA may consider utilizing recycled water from Roseville or Lincoln for agricultural and/or groundwater recharge uses.

#### **2.4.4** caw

The following sections are summary of CAW's West Placer Service Area's water use.

#### 2.4.4.1 Demands

Existing demands within the California American Water Company's (CAW) West Placer Service Area are entirely for M&I and include the Dry Creek/West (Placer Vineyards) region, Dry Creek/East region, and a portion of the Curry Creek region. CAW demands are

based on projected land use changes in the West Placer Service Area from rural to urban as part of a residential master planned communities

The West Placer Service Area accounts for approximately 1,100 of the estimated 56,800 total active customer connections in the Sacramento District of CAW (CAW, 2006). The current population of customer connections of the CAW West Placer Service Area is 3,041 and projected growth based upon land use is expected to reach approximately 24,500 to 28,000 residential dwelling units (DU) according to growth scenario (SACOG, 2006).

#### 2.4.4.2 Surface Water

**Existing Conditions.** Currently, CAW uses surface water supplied by PCWA and conveyed through Roseville's distribution system as the sole source of water in the service area. In the future, treated surface water will be delivered to the service area from the future Sacramento River Diversion facility. The Sacramento River Diversion facility is intended to allow withdrawals from the Sacramento River in order to relieve some of the withdrawals currently made from the American River. After construction of the facility, the proposed water supply will be part of PCWA's pending amendatory CVP contract with USBR for 35,000 AF/year.

**Future Conditions.** In the future CAW will have an increased demand for surface water which is anticipated to be provided by PCWA

#### 2.4.4.3 Groundwater

**Existing Conditions.** Currently groundwater is not used within the CAW West Placer Service Area. This existing condition is a result of a 1995 franchise agreement with Placer County that mandates no use of groundwater to prevent overdraft due to lack of policy control. CAW is of the understanding that this franchise agreement predates more recent conjunctive use planning studies and technical data that had enabled water agencies to plan to use groundwater conjunctively while sustaining a healthy groundwater basin.

Future Conditions. In the future, dry year supply is projected to be made up of surface water and groundwater. The contract between CAW and PCWA which does not allow use of groundwater in the West Placer water system will need to be clarified for future dry year supply. Although CAW intends to use surface water supplies to meet future demands, CAW also intends to supplement surface water supplies with groundwater using conjunctive use techniques for peaking and

backup water supply reliability.

#### 2.4.4.4 Recycled Water

**Existing Conditions.** CAW currently does not own or operate wastewater treatment or recycled water distribution facilities. However, Roseville supplies recycled water to major golf course (Morgan Creek Golf Course) within the West Placer Service Area.

**Future Conditions.** Recycled water will continue to be available within the West Placer Service Area from Roseville. Additional recycled water use may be investigated.



<sup>&</sup>lt;sup>3</sup> Sacramento Suburban Water District has a temporary transfer agreement with PCWA to receive up to 29,000 AF/year of MFP water. In the WSIP, it is anticipated that PCWA will take back the MFP water to meet its buildout demand.

SECTION 3

# **Management Plan Elements**



### **Management Plan Elements**

The elements of this WPCGMP include an overall goal, a set of definable basin management objectives (BMOs), and a series of plan components that discuss and identify the actions necessary for meeting the goal and objectives (**Figure 3-1**).

The purpose of this section is to describe the actions set forth for management of the groundwater basin. The term "BMO" is defined in some detail under differing conditions where impacts may occur to the WPCGMP area if the BMO criteria are exceeded. The BMOs are intended to be specific enough to hold the management of the basin to quantitative values (where possible) but flexible so as to be adaptive to increased knowledge of how the groundwater basin behaves over time as better monitoring data is collected.

#### 3.1 GROUNDWATER MANAGEMENT GOAL

The overarching goal of this WPCGMP is to maintain the quality and ensure the long term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGMP area.

#### 3.2 MAKE UP OF A BMO

A BMO has four main components: 1) specific objective(s) that can be scientifically measured with some level of confidence, 2) a clearly defined monitoring program designed to collect data necessary to evaluate the BMO's performance, 3) a reporting method of representing monitored data to identify success or forewarn of challenges with the management of the groundwater, and 4) programs and/or actions that are available to remedy a problem, if one is determined to exist. Each of these are explained in greater detail with references to sections in the Water Code, citations from other GMPs completed in the Sacramento Valley, and the California Groundwater Management Guidelines (Groundwater Resources Association of California, Second Edition, 2005).

The California State Water Code § 10753.7 (a) (1) states that the required components of management objective for the basin follow the excerpt below:

(1) Prepare and implement a groundwater management plan that includes basin management objectives for the groundwater basin that is subject to the plan. The plan shall include components relating to the monitoring and management of groundwater levels within the groundwater basin, groundwater quality degradation, inelastic land surface subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping in the basin.

This portion of the Water Code implies that BMO's need to have sufficient specificity in numerical objectives so as to be scientifically defensible in its implementation through monitoring and management programs. For example, one objective might be a BMO that states that groundwater elevations will not fall below 100 feet below the ground surface in any location within the basin (example only). A monitoring program can be developed to measure groundwater elevations at key locations in the basin twice a year. This data is entered into a Database Management System (DMS) that compares the measured results to the BMO for a determination of performance. A report is generated that allows the WPCGMP governance body¹ of the groundwa-



ter basin to evaluate the data, make a judgment on the level of concern, and, if needed, perform certain functions to remedy the problem (i.e. implementation of specific programs or changes to daily pumping operations).

Based on Section 2 of this WPCGMP, what we understand about groundwater and its hydrologic properties, and an understanding that land use conditions change from year to year applying differing stresses on the aguifers, the remedy to a particular problem may or may not be in the area where the detected problem occurs. A good example is the regional cone of depression in the southern portion of the WPCGMP area. The regional cone is dependent on pumping throughout the north portion of Sacramento County to a certain degree, and pumping throughout the southern WPCGMP area. So a problem in one management area, may require actions in another management area to remedy the situation.

As mentioned earlier, the BMO's need to be specific and measurable. For this reason, the selection of BMO's and the values attached to each have to: 1) be evaluated on the reasonableness of measuring the BMO's performance, 2) have the ability to provide clear and continuous reporting on the BMO's performance, and 3) indicate action items that are necessary in meeting the BMO. For this reason, considerable thought and significant attention needs to be given to each BMO in this WPCGMP to satisfy these criteria.

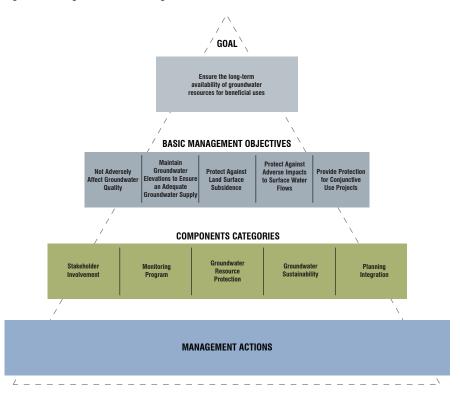
#### 3.3 BASIN MANAGEMENT OBJECTIVES

To meet the goal stated above, the plan participants have adopted five BMOs. These BMOs include the following:

# 3.3.1 BMO #1 – Management of the groundwater basin shall not have a significant adverse affect on groundwater quality.

BMO #1 is intended to preserve overall groundwater quality by stabilizing groundwater contamination, avoiding known contaminated areas, and protecting recharge areas. Currently there is insufficient data to allow the plan participants to understand all of the groundwater quality characteristics for the entire WPCGMP area. However, what is understood about groundwater quality in the WPCGMP area is groundwater that is analyzed for potential supply for potable use by Roseville and Lincoln meets Department of Health Services (DHS) public health criteria.

Figure 3-1 – Organization of Management Plan Elements

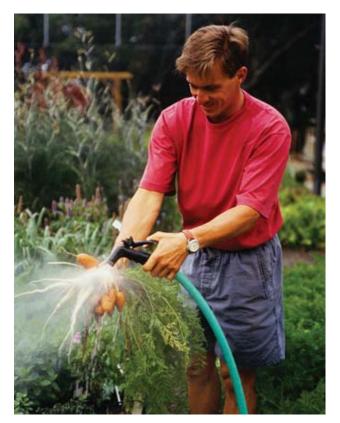


Within the WPCGMP area, there are documented occurrences of isolated groundwater contamination. The plan participants will make use of groundwater within the basin that is not hindered by contamination, and that such use does not cause or exacerbate degradation of the quality of the resource either at the contamination sites or from naturally occurring contaminants present in the groundwater. Where groundwater contamination is currently documented or if it occurs in the future, the plan participants will coordinate and cooperate with appropriate State and Federal regulatory agencies and with other responsible parties. The plan participants will pursue all actions within their powers that result in the containment and eventual remediation of the contaminant.

Natural recharge of groundwater occurs primarily from percolation of irrigation water, infiltration along creeks and drainages, infiltration of precipitation, and subsurface flow. Protection of natural recharge is an important element of this BMO.

Implementation of this BMO will allow for a better understanding of groundwater quality in the WPCGMP area and how changes in groundwater quality may be influenced by management practices and implementation of conjunctive use programs. As additional data from the monitoring program becomes available, this BMO will be more clearly defined and corrective actions established. By meeting this BMO, the plan participants will not adversely affect groundwater quality for the benefit of basin groundwater users.

<sup>&</sup>lt;sup>1</sup> A proposed governance body is discussed in Section 4.



# 3.3.2 BMO #2 – Manage Groundwater Elevations to ensure an adequate groundwater supply for backup, emergency, and peak demands without adversely impacting adjacent areas.

Over the past several decades, extensive groundwater pumping by agriculture, and more recently by urban development, has resulted in a persistent cone of depression in the southern Placer and northern Sacramento County areas. Due to the recent import of surface water into Sacramento County, southern Placer County groundwater elevations have stabilized at or near the cone of depression and some areas have recovered (See Hydrograph 10N06E0C001M in **Figure 2-5**). Results of the Sacramento County Water Forum Agreement (WFA) studies indicate that extensive lowering the aquifer can have adverse impacts on all groundwater users in the basin ranging from increased energy costs, to the need to deepen existing private and public wells, or even construction of new wells.

Full implementation of the conjunctive use programs in the basin may result in short term water levels being drawn down below previous historic lows, (this is a result of additional groundwater extraction during the drier and driest years). The intent of this BMO is to ensure an adequate groundwater supply by monitoring groundwater elevations within the WPCGMP area to maintain an acceptable "operating range." The future governance body will develop operation criteria for the future management of elevations to insure fluctuations during these times be quantified and then minimized so that overall groundwater elevations in the WPCGMP area do not adversely affect the availability of groundwater.

### 3.3.3 BMO #3 - Participate in State and Federal Land Surface Subsidence Monitoring Programs.

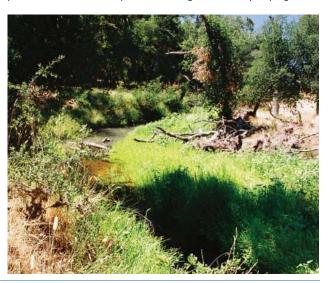
Land subsidence can cause significant damage to essential infrastructure. As with groundwater quality, historic land surface subsidence data within the WPCGMP area is limited. However, the general understanding, based on DWR and National Geodetic Survey data is that historic land surface subsidence has been minimal in the WPC-GMP area, with no known significant impacts to existing infrastructure. Given the historical trends, the potential for future land surface subsidence from groundwater extractions in the WPCGMP area appears remote. However, the plan participants intend to participate in State and Federal Land Surface Subsidence Programs.

DWR has recently begun developing a program to monitor subsidence in the Sacramento Valley. This program referred to as the Sacramento Valley - Land Surface Elevation Monitoring Program is in the beginning stages as DWR is gathering local support. DWR is actively seeking partners interested in cooperatively developing a land surface elevation network of Global Positioning System (GPS) monuments. Current project partners include Yuba County Water Agency and Butte, Glenn, and Tehama Counties. Participation ranges in form from financial assistance to in-kind staff hours. WPCGMD participants have agreed to join the DWR effort.

# 3.3.4 BMO #4 - Protect Against Adverse Impacts to Surface Water Flows in Creeks and Rivers due to groundwater pumping.

The intent of this BMO is to protect against adverse impacts to in stream water quality and quantity resulting from interaction between groundwater in the basin and surface water flows in the American and Sacramento River due to groundwater pumping.

At the present time, the flow regime is such that groundwater is not discharging to the river systems (i.e., rivers in the region are termed as losing streams to the groundwater) in the WPCGMP area. It is the intent of this WPCGMP that controllable operations of the groundwater system do not negatively impact the water quality and quantity of the area's rivers and streams regardless of potential stream flow depletion due to groundwater pumping or



an accretion due to artificial groundwater recharge. The adopting governance body of this WPCGMP will seek to gain a better understanding in cooperation with SGA and others of potential impacts of adverse groundwater and surface water interactions.

# 3.3.5 BMO #5 – Ensure Groundwater Recharge Projects Comply with State and Federal Regulations and protect beneficial uses of groundwater.

With the implementation of conjunctive use projects through direct artificial recharge using spreading basin, field flooding or injection wells (i.e. ASR projects²), protection of groundwater users of artificial recharged water is currently of key regulatory importance. For this reason, the intent of this BMO is to recognize that the governance body will comply with appropriate State and Federal regulations when implementing groundwater recharge projects.

#### 3.4 WPCGMP COMPONENTS

The WPCGMP includes a variety of components that are required by CWC § 10753.7, recommended by DWR Bulletin 118 (2003), optional under CWC § 10753.8, and other components that the plan participants have already begun. These components can be grouped into five general categories: 1) stakeholder involvement, 2) monitoring program, 3) groundwater resource protection, 4) groundwater sustainability, and 5) planning integration. Each category and its components are presented in this section. Under each component is a discussion, proposed actions, and identification of the objectives toward which the component is directed.

#### 3.5 COMPONENT CATEGORY 1: STAKEHOLDER INVOLVEMENT (REQUIRED)

The management actions taken by the future governance body may have a wide range of impacts on a broad range of individuals and agencies that ultimately have a stake in the successful management of the basin. The local consumer may be most concerned about water rates or assurances that each time the tap is turned a steady, safe stream of water is available. To the industrial, agricultural, or agricultural-residential private well owner, they want to make sure their wells are safe from dewatering and degradation of water quality, and that energy costs do not increase significantly. To the environmental community and non-governmental organizations, they will want assurances that management of the basin does not create adverse environmental affects in the region. To large State and Federal water resource agencies, the degree to which the actions taken under this WPCGMP can achieve local supply reliability and further banking and exchange programs provides opportunities for State and Federal water programs to meet

statewide needs, particularly in drier years.

To address the needs of all the above stakeholders, this WPCGMP pursues several means of achieving broader involvement in the management of the WPCGMP area. These include: (1) involving members of the public and other interested parties, 2) involving other agencies within and adjacent to the WPCGMP area, (3) using advisory committees for development and implementation of the WPCGMP, (4) developing relationships with state and federal water agencies, and (5) pursuing a variety of partnerships to achieve local supply sustainability. Each of these is discussed further below.

#### 3.5.1 Involving the Public

Groundwater in California is a public resource, and the WPCGMP Technical Review Committee (TRC) is committed to involving the public in the development and implementation of the WPCGMP. The primary reason for the WPCGMP is to "to maintain the quality and ensure the long-term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGMP area." In order to meet this goal, the plan participants must intelligently manage current and future use of the shared groundwater Sub-basin underlying their city limits/service areas, respectively. To effectively manage this resource the plan participants must have public input and, ultimately, public approval at each decisive step. The plan participants understand that this can be accomplished only when the public is continually involved in the decision-making process.



May 2007 celebration of Roseville's first ASR well

The development of the WPCGMP was completed in many stages as entities interested in the development of this plan were added periodically and participated in the TRC. Roseville initially intended to create a GMP that covered an area comprised of their city limits. Soon after, PCWA agreed to develop a joint plan with Roseville. This partnership expanded the study boundaries to include that portion of PCWA's service area which is located within the Sub-

<sup>&</sup>lt;sup>2</sup> In particular for ASR projects within the Central Valley, regulatory agencies are focusing on projects where chemically treated potable water is used as the source water used for recharge. Chemical treatment with the use of chlorine, when in the presence of dissolved organic carbon, causes the formation of disinfection by-products such as Trihalomethanes (THM). THMs routinely sampled and analyzed in potable source water, used for recharge, are at levels well below public drinking water criteria established DHS. However, based on the regulatory concerns, it is the intent of this WPCGMP to provide controls over who uses artificially recharged groundwater. These controls include monitoring the proposed position of new wells when being drilled into potential artificial recharged groundwater "bubble" areas and areas in a down gradient groundwater flow directions or providing surface water deliveries for preexisting groundwater users. For this reason, the adopting governance body of this WPCGMP will work in coordinately with State and Federal regulators on conjunctive use projects within the study area to protect beneficial uses of groundwater.

basin. In addition to Roseville, the new study area includes the City of Lincoln and portions of the City of Rocklin. This expansion led to the project being named the WPCGMP.

In recognition that effectiveness of the WPCGMP is dependent on the agreed management decisions of all groundwater users in the area, the City of Lincoln accepted an invitation from Roseville and PCWA to become a GMP partner. CAW, a private water purveyor with a service area along the southwest edge of Placer County, joined the effort in early 2007 as a partner. The City of Rocklin is not a groundwater user; the city's municipal water supply needs are provided by PCWA. Finally, Placer County has been an active participant in the GMP's development; however, as the County is not a water purveyor it has not formally joined the WPCGMP as a full partner.

In accordance with CWC § 10753.2, public notices were published by GMP partners as required (Appendix A). These notices were supported by a variety of outreach and information activities conducted by plan participants as summarized in WPCGMP Public Outreach and Information Plan (Appendix B). It is anticipated the outreach plan will be adapted to meet the needs of the WPCGMP and its stakeholders as conditions in the basin change.

Table 3-1: Public notices published during development of the WPCGMP per CWC § 10753.2

Partner	Public Notice	Date and Publication		
	Notice of intent to adopt a resolution to prepare a GMP	July 15 & 22, 2005; The Sacramento Bee		
ville	Text of adopted resolution published	November 18 & 25, 2005; The Sacramento Bee		
City of Roseville	Notice of public hearing to consider adoption of GMP	June 30 & July 7, 2007; Roseville Press Tribune		
City	Notice of public hearing to adopt GMP	<sup>1</sup> July 27, 2007; Posting of City of Roseville agenda to adopt a GMP		
	Resolution of adoption	August 1, 2007		
	Notice of intent to adopt a resolution to prepare a GMP	November 30 & December 7, 2006; Lincoln News Messenger		
u e	Text of adopted resolution published	February 1 & 8, 2007; Lincoln News Messenger		
City of Lincoln	Notice of public hearing to consider adoption of GMP	February 1 & 8, 2007; The Lincoln News Messenger		
City	Notice of public hearing to adopt GMP	¹November 21, 2007, 2007; Posting of City of Lincoln agenda to adopt a GMP		
	Resolution of adoption	November 27, 2007		
ency	Notice of intent to adopt a resolution to prepare a GMP	October 19 & 26, 2006; The Sacramento Bee/ Auburn Journal		
Water Age	Text of adopted resolution published	November 9 & 16, 2006; The Sacramento Bee/ Auburn Journal		
Placer County Water Agency	Notice of public hearing to consider adoption of GMP	August 2 & 9, 2007; The Sacramento Bee/ Auburn Journal		
Notice of public hearing to adopt GMP		1August 31, 2007; Posting of PCWA agenda to adopt a GMP		
	Resolution of adoption	September 6, 2007		

<sup>&</sup>lt;sup>1</sup> Agenda items posted in Compliance with Section 54954.2 of the California Brown Act.

Once the plan participant group was set, the TRC engaged in a series of briefings to inform and gauge specific stakeholder groups' interest and involvement in the WPCGMP. Stakeholder groups briefed on the plans development were: Roseville Public Utility Commission; Lincoln City Council; Placer County Water Agency Board of Directors; Sacramento Groundwater Authority; and the Water Caucus of the Water Forum. This activity was supported by a project website (www.wpcgmp.org). The website featured a history of plan development, plan content, participant contact information, links, public notices and other information materials. The plan participants will continue to use their respective websites to distribute information on WPCGMP implementation activities to the public until the governance body of the WPCGMP is in place (as described in detail in **Section 4.6**).

In addition to stakeholder briefings, the TRC hosted the WPCGMP Open House, June 14, 2007, at the McBean Pavilion in Lincoln. Meeting invitees included area water purveyors, regional environmental organizations, local landowners, business owners, government agencies, and other interested parties. This meeting provided the TRC the opportunity to discuss the GMP with the public and other stakeholders and incorporate their ideas and comments to the document. The draft WPCGMP was released for formal public comment following a July 11, 2007, public hearing by the Roseville City Council. Once public comments are received and incorporated to the document as necessary, the Roseville City Council is anticipated to adopt the plan by August 1, 2007. Formal adoption by other plan partners will begin following adoption by the City of Roseville.

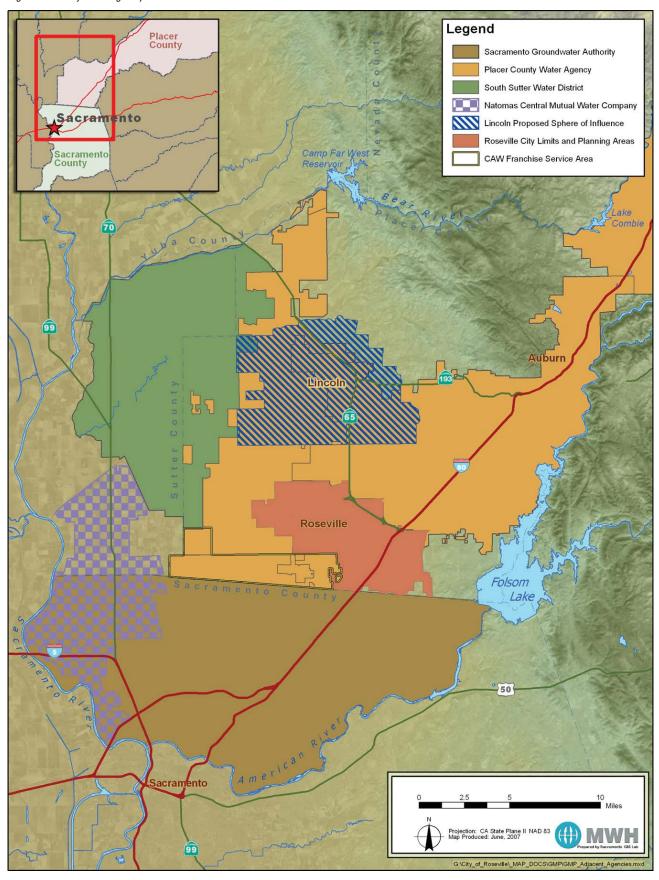
**Actions** — The governance body will take the following actions:

- Continue efforts to encourage public participation as opportunities arise.
- Review and take actions from the Public Outreach Plan as necessary during implementation of various aspects of the WPCGMP.
- Continue to provide briefings to the Water Forum Successor Effort on WPCGMP implementation progress.
- Work with basin stakeholders to maximize outreach on WPC-GMP activities including the use of the plan and plan participants' websites.

### 3.5.2 Involving Other Agencies Within and Adjacent to the WPCGMP Area

**Figure 3-2** shows adjacent purveyors within the WPCGMP area and some of the key adjacent entities that the WPCGMP has been coordinating with during development of this WPCGMP. Plan participants have provided briefings, presentations, and/or workshops to multiple adjacent agencies including the Sacramento Groundwater Authority (SGA) and its member agencies. Plan participant outreach has also included the Water and Environment Caucuses of the Water Forum, South Sutter Water District (SSWD), Natomas Central Mutual Water Company (NCMWC), Nevada Irrigation District (NID), San Juan Water District, City of Rocklin, City of Citrus Heights, Rio Linda/Elverta Community Water District, Yuba County Water Agency, Sacramento Suburban Water District, and Camp Far West Water District.

Figure 3-2 – Adjacent Agency Service Areas



Beginning in August 2007, Roseville's City Council, PCWA's Board of Directors, Lincoln's City Council, and CAW management plans to adopt the WPCGMP. This WPCGMP recognizes Placer County, South Sutter Water District, Sacramento Groundwater Authority, Natomas Central Mutual Water Company, and Nevada Irrigation District as a partner in managing the Sub-basin and has requested their review and assistance in the preparation of this WPCGMP.

**Actions** — The governance body of the WPCGMP will take the following actions:

- Continue a high level of involvement with SGA, SSWD, NC-MWC, NID and other interested parties in implementing the WPCGMP
- Provide copies of the adopted WPCGMP and subsequent annual reports to representatives from the SGA, SSWD, NCMWC, NID and other interested parties.
- Meet with representatives from the SGA, SSWD, NCMWC, NID and other interested parties, as needed.
- Coordinate a meeting with other self supplied groundwater pumpers in the WPCGMP area to inform them of the plan
- participant's management responsibilities and activities, and develop a list of other self supplied groundwater pumpers concerns and needs to the plan participant's management.
- Coordinate a meeting with the agricultural groundwater pumpers in the WPCGMP area to inform them of the plan participant's management responsibilities and activities, and develop a list of agricultural groundwater pumpers concerns and needs to the plan participant's management.

#### 3.5.3 Utilizing Advisory Committees

The plan participants have and will continue to use advisory committees in development and implementation of this WPCGMP. Prior to beginning development of the WPCGMP, the plan participants developed a group made up primarily of plan participants staff, named as the TRC to guide development of the WPCGMP. The TRC consisting of Roseville, PCWA, Lincoln, Placer County, CAW, and DWR staff and a representative from agricultural interests within the WPCGMP area and met periodically approximately on a bimonthly basis during the development of this WPCGMP.

**Actions** — The plan participants will take the following action:

 Upon adoption of the WPCGMP, the TRC will periodically meet to discuss scheduling and functions to guide implementation of the plan and provide these recommendations to the WPCGMP governance body.

### 3.5.4 Developing Relationships with State and Federal Agencies

Working relationships between the governance body and local, state, and federal regulatory agencies are critical in developing and implementing the various groundwater management strategies and actions detailed in this WPCGMP.

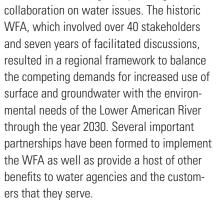
The TRC has developed on-going working relationships with local, state, and federal regulatory agencies (e.g., Placer County, Environmental Management Department (EMD), California DHS, etc.).

**Actions** — The governance body of the WPCGMP will take the following action:

 Continue existing and develop new working relationships with local, State, and Federal regulatory agencies.

#### 3.5.5 Pursuing Partnership Opportunities

This WPCGMP is committed to facilitating partnership arrangements at the local, State, and Federal levels. Over the past decade, the greater Sacramento-area water community and other local leaders have made great strides toward regional planning and



While the facilities necessary to implement, develop and expand conjunctive use programs in the WPCGMP area have not been fully identified, the potential exists to develop and expand facilities on a Sub-basin wide level to achieve broader regional and statewide benefits. The needed facilities, however, would require substantial resources. To investigate any further opportunities would require resources provided through partnerships with potential beneficiarios.

**Actions** — The governance body of the WPCGMP will take the following actions:

- Continue to promote partnerships that achieve both local supply reliability and achieve broader regional and statewide benefits.
- Continue to track and apply for grant opportunities to fund regional groundwater management activities and local water infrastructure projects.

### 3.6 COMPONENT CATEGORY 2: MONITORING PROGRAM (REQUIRED)

At the heart of this WPCGMP is a monitoring program capable of assessing the current status of the basin and predicting responses in the basin as a result of future management considerations. The program includes monitoring groundwater elevations, monitoring groundwater quality, monitoring and assessing the potential for land surface subsidence resulting from groundwater extraction, and developing a better understanding of the relationship between surface water and groundwater along the Feather, Bear, American, and Sacramento Rivers and other smaller streams. Also important is the establishment of monitoring protocols to ensure the accuracy and consistency of data collected.

#### 3.6.1 Groundwater Elevation Monitoring

DWR has collected a significant amount of groundwater elevation measurements extending from prior to 1950 to 2007. DWR's program collects biannual (spring and fall) groundwater level data from more than 32 wells throughout Placer County. In addition, over the past seven years the City of Lincoln has begun to collect extensive groundwater elevation measurements from production and monitoring wells within its service area. Plan participants have used some of this most recent data to generate a groundwater contour map for the WPCGMP area (see Section 2.1.4). However, because DWR only monitors and measures certain wells within the County, Roseville and Lincoln, groundwater contour maps for the County or the WPCGMP area have not been created on a consistent basis. As such, it is difficult to compare a historic contour map with a recent one. For this reason, plan participants are establishing a standardized network of wells that combines those monitored by DWR and other water purveyors. It is the plan participants' intent that the wells comprising this program be maintained as a consistent long-term network that represents overall groundwater elevation conditions in the basin. Figure 3-3 shows the wells that will be evaluated to develop this network.

Wells will be selected to provide uniform geographic coverage throughout the approximately 192.5 square mile WPCGMP area, and in an area around the northern, western, eastern and southern perimeter of the WPCGMP area. The well network will be developed by first establishing a network of sampling grids using the following method:

- Overlay a matrix of evenly spaced points over the entire WPC-GMP area.
- Surround matrix of points with polygons.
- Conform the boundaries of the polygons to WPCGMP area boundaries and regenerate area grids.

The resulting grid, shown on Figure 3-3, includes approximately 50 polygons of roughly equal area of about five square miles each. Plan participants will try to establish at least one monitoring well within each of the polygons to act as the future monitoring network.

Plan participants will give preference to wells currently in DWR's monitoring program. These wells will be evaluated first because (a) they have long records of historic groundwater level data and are useful in assessing trends within the groundwater basin, (b) uniform protocols were used in measuring and recording the water level data, and (c) these are typically non-producing wells, so water level readings represent relatively static levels.

Second, the plan participants will identify other municipal and private wells with well construction information, long records of groundwater elevation data and giving preference to those wells with the lowest recent extraction volumes.

**Actions**— Additional actions by the plan participants will include:

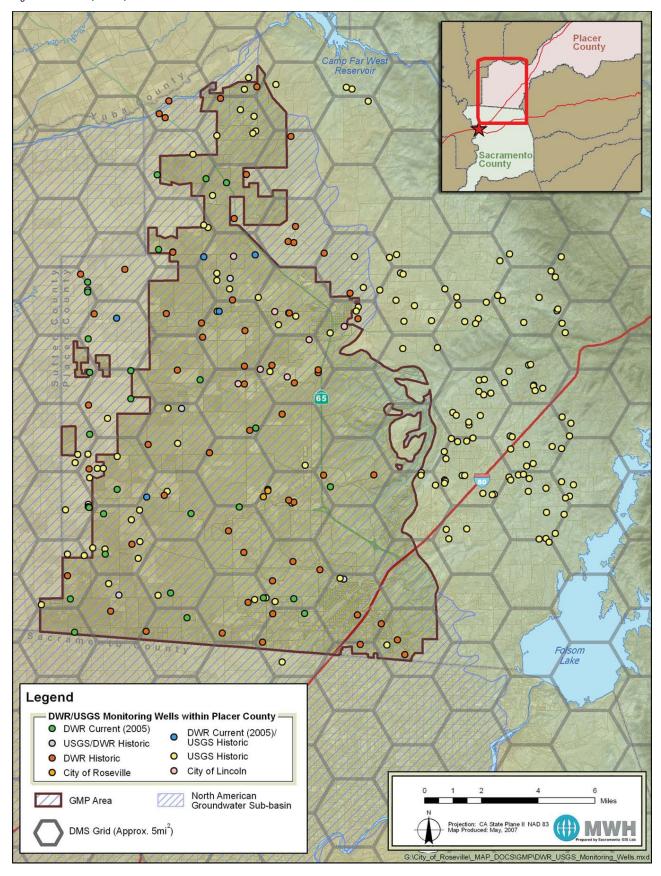
- Coordinate with DWR and others to identify an appropriate group of wells for monitoring for a spring 2008 set of groundwater elevation measurements.
- Coordinate with DWR and others to ensure that the selected wells are maintained as part of a long-term monitoring network.
- Coordinate with DWR to ensure that the timing of water level data collection by other agencies coincides within one month of DWR data collection. Currently DWR collects water level data in the spring and fall.
- Coordinate with other agencies to ensure that needed water level elevations are collected and verify that uniform data collection protocols are used among the agencies.
- Consider ways to fill gaps in the monitoring well network by identifying suitable existing wells or identifying opportunities for constructing new monitoring wells.
- Assess groundwater elevation trends and conditions based on the monitoring well network annually.
- Assess the adequacy of the groundwater elevation monitoring well network annually.
- Identify a subset of monitoring wells that will be monitored more frequently than twice annually to improve the plan participants' understanding of aquifer responses to pumping throughout the year.

#### 3.6.2 Groundwater Quality Monitoring

Because most of the wells in the basin are used for agricultural purposes, an extensive record of water quality data is not available for most wells. More recently public water supply wells have been constructed in the WPCGMP area, and therefore water quality data is available for these wells. These wells are listed on **Table 2-3**. Roseville and Lincoln have compiled available historic water quality data for constituents monitored as required by DHS under CCR Title 22.

This level of monitoring is sufficient under existing regulatory guidelines to ensure that the public is provided with a safe and reliable backup drinking water supply. Based on the limited list of contaminated sites identified in Section 2.1.3, it may be advisable to have in place a network of shallow (less than 200 feet deep) monitoring wells on the eastern edge of the basin where recharge

Figure 3-3 – DWR, USGS, Roseville and Lincoln Wells



primarily occurs to serve as an early warning system for contaminants that could make their way to greater depths in the basin where production wells extracts groundwater. Over the past several years, Lincoln has begun to install such a network. In addition, Roseville has constructed three monitoring wells located adjacent to the Diamond Creek Well to collect groundwater elevation and quality data during direct recharge as a result of their Aquifer Storage and Recovery (ASR) program. Additional monitoring wells for groundwater elevation and quality data collection are anticipated as Roseville expands their ASR program in western portions of the City.



**Figure 2-8** shows existing WPCGMP area production wells. CCR Title 22 water quality reporting is required by DHS for each of these public drinking water sources. The plan participant's water quality monitoring network includes these wells. The water quality monitoring well network may be expanded to include additional DWR and privately owned wells based on the outcome of coordination meetings with these agencies and various landowners.

**Actions**— The following actions will be taken by the plan participants to monitor and manage groundwater quality:

- Coordinate with cooperating agencies to verify that uniform protocols are used when collecting water quality data.
- Coordinate with local, state, and federal agencies to identify
  where wells may exist in areas with sparse groundwater quality
  data. Identify opportunities for collecting and analyzing water
  quality samples from those wells.
- Assess the adequacy of the groundwater quality monitoring well network annually.

#### 3.6.3 Land Surface Elevation Monitoring

Subsidence of the land surface resulting from compaction of underlying formations affected by head (groundwater level) decline is a well-documented concern throughout much of the Central Valley. During a typical pumping season, changes in land surface elevation can be observed as a result of both elastic and inelastic subsidence in the underlying basin. Elastic subsidence results from the reduction of pore fluid pressures in the aquifer system and typically rebounds when pumping ceases or when groundwater is otherwise recharged resulting in increased pore fluid pressure. Inelastic subsidence occurs when pore fluid pressures decline to the point that aquitard (a silt or clay bed of an aquifer system) sediments collapse resulting in permanent compaction and reduced ability to store water in that portion of the aquifer.

While some land surface subsidence is known to have occurred as a result of groundwater extraction west of the Sacramento River, it is believed that the extent of subsidence east of the Sacramento River has been minimal. DWR maintains 13 extensometer stations in the northern Sacramento Valley: 3 in Glenn County, 5 in Butte County, 2 in Colusa County, 1 in Sutter County, and 2 in Yolo County.

According to DWR there is no documented evidence of land subsidence in the WPCGMP area (DWR, 1997). However, data from an extensometer indicate a small amount of downward land surface displacement occurred during the 1994, 1995, and 1996 summer irrigation seasons. This limited data set indicates that the land surface subsides and rebounds with groundwater elevation declines and increases, respectively. According to DWR, these records, based on this limited data set, show no permanent land subsidence has occurred at this station, which is located west of the WPCGMP area approximately at the intersection of Highway 99 and the Natomas Cross Canal.

Historical benchmark elevation data for the period from 1912 through the late 1960s obtained from the National Geodetic Survey (NGS) has been used to evaluate land subsidence in north Sacramento County. From 1947 to 1969 the magnitude of land subsidence measured at benchmarks north of the American River in Sacramento County ranged from 0.13 feet to 0.32 feet, with a general decrease in subsidence in a northeastward direction. This decrease is consistent with the geology of the area: formations along the eastern side of the Sacramento Valley are older than those on the western side and are subject to a greater degree of pre-consolidation making them less susceptible to subsidence. The maximum documented land subsidence of 0.32 feet was measured at both benchmark L846, located approximately two miles northeast of the former McClellan AFB, and benchmark G846, located approximately one mile northeast of the intersection of Greenback Lane and Flkhorn Boulevard

Whether this is inelastic subsidence is indeterminate from the data, but it is clear that the magnitude of the potential subsidence of benchmarks during the above mentioned periods appears negligible.

An extensometer measures subsidence at a single point. To monitor subsidence within the WPCGMP area key survey stations would need to be located. NGS approved stations using a ground positioning system (GPS) or conventional leveling will determine the change in a single point land surface elevation and ultimately be used to evaluate land subsidence within the WPCGMP area.

As described previously, DWR has recently begun developing a program to monitor subsidence in the Sacramento Valley. This program referred to as the Sacramento Valley - Land Surface Elevation Monitoring Program is in the beginning stages as DWR is gathering local support. Land surface elevation data collected as part of this program could be used by cooperating agencies to evaluate if subsidence is being caused by groundwater pumping. DWR is actively seeking partners interested in cooperatively developing a land surface elevation network of GPS monuments. Current project partners include Yuba County Water Agency and Butte, Glenn, and Tehama Counties. Participation ranges from financial assistance to in-kind staff hours. WPCGMP participants have joined the effort.

DWR has identified a gap of subsidence data in Placer County. DWR estimates that 8 monuments would be needed to fill the gap. DWR has provided a rough per monument dollar estimate of \$4,500. For this reason, it is estimated that \$36,000 worth of monuments would be necessary to fill the gap. DWR will evaluate the information provided by Roseville and Lincoln and decide whether the survey points meet NGS standards.

**Actions** — While available data and reports indicate that land surface subsidence is not a concern in the WPCGMP area, the plan participants are interested in monitoring for potential land surface subsidence, which may include:

 Coordinate with other agencies, particularly the DWR, USGS, and SGA to determine if there are other suitable benchmark locations in the WPCGMP area to aid in the analysis of potential land surface subsidence.

#### 3.6.4 Surface Water Groundwater Interaction Monitoring

The interaction between groundwater and surface water has not been extensively evaluated within the WPCGMP area. Due to the fact that only IGSM modeling results are available for the WPC-GMP area, the plan participants recommend the following actions:

**Actions** — The plan participants will pursue actions to better understand the relationship between surface and groundwater in the WPCGMP area, including:

- Work cooperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.
- Coordinate with local, State, and Federal agencies to identify available surface water quality data from the Feather, Bear and

- Sacramento rivers proximate to the WPCGMP area.
- Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points.
- Continue to coordinate with local, State, and Federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface watergroundwater interaction along the Feather, Bear, and Sacramento rivers.
- Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.



### 3.6.5 Protocols for the Collection of Groundwater Data

Through the work completed as part of the SGA's GMP, MWH has evaluated the accuracy and reliability of groundwater data collected by cooperating agencies within the Sacramento Region (MWH, 2002). The evaluation indicated a significant range of techniques, frequencies and documentation methods for the collection of groundwater

level and quality data. Although the groundwater data collection protocol may be adequate to meet the needs of individual agencies, the lack of consistency yields an incomplete picture of basinwide groundwater conditions. Other types of groundwater data collection protocols are included in Sections 3.5.1 and 3.5.2 above.

**Actions** — To improve the comparability, reliability and accuracy of groundwater data within the WPCGMP area and SGA, the plan participants will take the following actions:

- Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements. This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).
- Provide cooperating agencies with guidelines on the collection of water quality data developed by DHS for the collection, pretreatment, storage, and transportation of water sample.
- Provide training on the implementation of these SOPs to cooperating agencies, if requested.

#### 3.6.6 Groundwater Data Management System

In order for the plan participants to achieve their primary objective of sustaining the groundwater resource within the WPCGMP area, it was essential to develop a data storage and analysis tool, or DMS. The DMS was developed by MWH under contract with the USACE. Other local sponsors included SGA and its member agencies. DWR, and SCWA.

The DMS is a public domain application developed in a Microsoft Visual Basic environment and is linked to a SQL database containing North American Basin purveyor data. The DMS provides the end-user with ready access to both enter and retrieve data in either tabular or graphical formats. Security features in the DMS allow for access restrictions based on a variety of user permission levels. Data in the DMS include:

- Well construction details.
- Known locations of groundwater contamination and potentially contaminating activities.
- Long-term monitoring data on monthly extraction volumes.
- Water elevations.
- Water quality
- Aguifer characteristics based on well completion reports.

The DMS allows for the viewing of regional trends in ground-water elevation and quality not previously available to the plan participants. The DMS has the capability of quickly generating well hydrographs and groundwater elevation contour maps using historic groundwater level data. The DMS also has the ability to view water quality data for CCR Title 22 required constituents as a temporal concentration graph at a single well or any constituent can be plotted with respect to concentration throughout the WPCGMP area. Presentation of groundwater elevation and quality data in these ways will be useful for making groundwater basin management decisions.

Groundwater data from a select group of Roseville's ASR compatible backup water supply wells and monitoring wells has already been loaded into the DMS. Other plan participants are currently in the process of evaluating the future use of the DMS. If used throughout the WPCGMP area, data transfer protocols will be established so that groundwater data in both the SGA and WPC-GMP areas (by cooperating agencies, DWR, USGS, etc.) can be readily appended to the database and analyzed through the DMS. Annual summaries of groundwater monitoring data would then be prepared using the analysis tools in the DMS and presented in the update to the State of the Basin report (see Section 4).

Again, if the DMS were widely used and once fully populated and quality-control checked a summary of existing basin conditions would be prepared. From this, an initial summary analysis would be performed on at least an annual basis to assess the impacts of current and future plan participants' management actions on the groundwater system.

**Actions** — If widely used, to maintain and improve the usability of the DMS, plan participants will take the following actions:

- Provide users staff with training and use of a Data Management System (DMS).
- Populate and update a DMS with available groundwater, water quality, well, and surface water data.
- Develop list of recommended enhancements to a DMS.
- Provide resources for maintaining and updating a DMS.
- Provide resources for maintaining, updating and utilizing a groundwater model or the North American River IGSM.
- Develop and present a biennial State of the Basin Report.

### 3.7 COMPONENT CATEGORY 3: GROUNDWATER RESOURCE PROTECTION



Monitoring well containment box

Plan participants consider groundwater protection to be one of the most critical components of ensuring a sustainable groundwater resource. In this WPCGMP, resource protection includes both the prevention of contamination from entering the groundwater basin and the remediation of existing contamination plumes. Prevention measures include proper well

construction and destruction practices, development of wellhead protection measures, and protection of recharge areas. Measures to prevent contamination from human activities as well as contamination from natural substances such as saline water bodies from entering the potable portion of the groundwater system will be addressed as part of this component category.

#### 3.7.1 Well Construction Policies

Placer County typically administers the well permitting program for the entire County, with the exception of lands within Roseville and Lincoln city limits. Placer County Environmental Management Department (EMD) well permitting program is detailed in Placer Counties Municipal Code sections 13.08, which define the purpose of the Well Water code as:

It is the purpose of this article to protect the health, safety, and general welfare of the people of the county of Placer by ensuring that the groundwater of this county will not be polluted or contaminated. To this end, minimum requirements are contained in this article for construction, reconstruction, repair, and destruction of water wells, cathodic protection wells, and monitoring wells. (Prior code § 4.800)



Placer County Municipal Code sections 14.11.030 defines the permit requirements as:

- a) When Required. No person shall dig, bore, drill, deepen, modify, repair, or destroy a water well, cathodic protection well, observation well, or monitoring well without first applying for and receiving a permit as provided in this article unless exempted by law.
- b) Penalty for Failure to Obtain Permit. Any person who commences any work for which a permit is required by this article without having previously obtained a permit shall be required, if subsequently granted a permit for this work, to pay double the standard permit fee.
- c) Emergency Work. The above provisions shall not apply to emergency work required on short notice to maintain drinking water or agricultural supply systems. For the emergency work, when county offices are closed, a permit may be issued after such work has commenced, provided the following conditions are met:
- The permit application is made the first day county offices are open following said work; and
- The well system serves an existing structure or facility or agricultural operation; and
- The person responsible provides written documentation to the enforcement agency that such work was urgently necessary; and
- Conformance with Standards. Demonstrate that all work performed was in conformance with the technical standards as designated in Section 13.08.060. (Prior code § 4.808)

The Well Water Code as part of the Placer County's Municipal Code may be found at the web address below:

#### http://ordlink.com/codes/placer/index.htm

Roseville's Environmental Utilities Engineering Division is the permitting agency for wells located within the Roseville's city limits. For this reason, Roseville is aware of proposed and active wells within the Roseville's city limits. In order to permit a well in Roseville, a Well Construction Application and Permit Form must be filed with the environmental utilities department. An engineer from Roseville provides inspection services when new wells are constructed including observations during well seal grouting.

This process is detailed in the Roseville's Well Water Code as part of the Roseville's Municipal Code. Roseville's Municipal Code section 14.11.010 defines the purpose of the Well Water code as:

It is the purpose of this chapter to protect the health, safety and general welfare of the people of the City of Roseville by ensuring that the ground waters of the City will not be polluted or contaminated. It is also the purpose of this chapter that all ground waters be used to the benefit of the people of the City of Roseville. To this end, minimum requirements are contained in this chapter for construction, reconstruction, repair, use and destruction of water wells, cathodic protection wells, monitoring wells, and soil boring activities undertaken to investigate the environmental condition or water-bearing capacities of a property. (Ord. 2895 § 1 (part), 1995.)

The City Municipal Code sections 14.11.030 defines the permit requirements as:

No person shall dig, bore, drill, deepen, modify, repair or destroy a water well, cathodic protection well, observation well, monitoring well or any other excavation that may intersect ground water without first applying for and receiving a well permit as provided in this chapter unless exempted by law. (Ord. 2895 § 1 (part), 1995.)

The Well Water Code as part of the Roseville's Municipal Code may be found at the web address below:

#### http://bpc.iserver.net/codes/rosevill/index.htm

Starting in 1998, Lincoln assumed the responsibility from the Placer County EMD for the construction of all private and public wells within the city limits. Lincoln's Public Works Department has a permitting process in place to facilitate this responsibility. Typically, Lincoln does not allow the permitting of new private wells within city limits.

**Actions** — The plan participants will take the following actions:

- Ensure that the SGA, SSWD, NCMWC, NID, and others are provided a copy of the plan participants/Placer County's well ordinance and procedures and understand the proper well construction procedures.
- Provide a copy of the most recently delineated plume extents (if any) to the SGA, SSWD, NCMWC, NID, and others.
- Coordinate with the SGA, SSWD, NCMWC, NID, and others to provide guidance as appropriate on well construction. Where feasible and appropriate, this could include the use of subsurface geophysical tools prior to construction of the well to assist in well design.

#### 3.7.2 Well Abandonment and Well Destruction Policies



Placer County typically administers the well destruction program for the entire County, with the exception of lands within the Roseville and Lincoln city limits. Placer County EMD well destruction program is detailed in Placer County's Muncipal Code sections 13.08.100., which defines the purpose of the Well Water code as:

"Except as otherwise specified, the standards for the construction, modification or destruction of wells shall be as set forth in:

- a) Department of Water Resources Bulletin 74-81. The California Department of Water Resources Bulletin 74-81, "Water Well Standards, State of California," except as modified by subsequent revisions.
- b) All Subsequent Supplements and Revisions. All subsequent Bulletin 74-81 supplements or revisions issued by the Department of Water Resources, once the revised standards have been reviewed at appropriate public hearings. (Prior code § 4.820)

Roseville's Municipal Code sections 14.11.030 defines abatement of abandoned wells as:

All persons owning an Abandoned Well as defined shall destroy it, following the guidelines set forth in Bulletin 74-90 and this chapter. (Ord. 2895 § 1 (part), 1995.)

Similar well construction policies, starting in 1998, Lincoln assumed the responsibility from the Placer County EMD for the permitting of all well destructions within the city limits. Lincoln's Public Works Department has a permitting process in place to facilitate this responsibility.

One concern expressed by the plan participants is that some abandoned domestic or agricultural wells may not been properly destroyed. For this reason, the plan participants plan to take the following actions.

**Actions** — The plan participants will take the following actions:

- Review DWR well records for all known wells in the WPCGMP area which were reported abandonment and destruction. Rate and provide a survey on the confidence of proper destruction based on the information provided on the report.
- Ensure that the SGA, SSWD, NCMWC, NID, and others are provided a copy of the Roseville/Lincoln /Placer County's code and understanding the proper destruction procedures and support implementation of these procedures.

- Follow up with the SGA, SSWD, NCMWC on the reported abandoned and destroyed wells to confirm the information collected from DWR. Follow up with the SGA, SSWD, NCMWC, and NID on the reported abandoned and destroyed wells to confirm the information collected from DWR.
- Provide a copy of the information of abandoned and destroyed wells in Placer County to fill gaps in County records (if any).
- Meet with Placer County EMD and DWR to ensure that wells in the WPCGMP area are properly abandoned or destroyed.
- Meet with the Placer County Farm Bureau and Placer County Agricultural Commission to encourage them to help educate farmers regarding the identification and proper destruction of abandoned wells.
- Obtain "wildcat" map from California Division of Oil and Gas to ascertain the extent of historic gas well drilling operations in the area as these wells could function as conduits to groundwater if not properly destroyed.

#### 3.7.3 Wellhead Protection Measures

Identification of wellhead protection areas is a component of the Drinking Water Source Assessment and Protection (DWSAP) Program administered by DHS. DHS set a goal for all water systems statewide to complete Drinking Water Source Assessments by mid-2003. Roseville has completed their required assessments by performing the three major components required by DHS:

- Delineation of capture zones around source wells
- Inventory Potential Contaminating Activities (PCAs) within protection areas
- Analyze the vulnerability of source wells to PCAs

Delineation of capture zones includes using groundwater gradient and hydraulic conductivity data to calculate the surface area overlying the portion of the aquifer that contributes water to a well within specified time-of-travel periods. Typically, areas are delineated representing 2-, 5-, and 10-year time-of-travel periods. These protection areas need to be managed to protect the drinking water supply from viral, microbial, and direct chemical contamination.

Inventories of PCAs include identifying potential origins of contamination to the drinking water source and protection areas. PCAs may consist of commercial, industrial, agricultural, and residential sites, or infrastructure sources such as utilities and roads. Depending on the type of source, each PCA is assigned a risk ranking, ranging from "very high" for such sources as gas stations, dry cleaners, and landfills, to "low" for such sources as schools, lakes, and non-irrigated cropland.

Vulnerability analysis includes determining the most significant threats to the quality of the water supply by evaluating PCAs in terms of risk rankings, proximity to wells, and Physical Barrier Effectiveness (PBE). PBE takes into account factors that could limit infiltration of contaminants including type of aquifer, aquifer material (for unconfined aquifers), pathways of contamination, static water conditions, hydraulic head (for confined aquifers), well

operation, and well construction. The vulnerability analysis scoring system assigns point values for PCA risk rankings, PCA locations within wellhead protection areas, and well area PBE; the PCAs to which drinking water wells are most vulnerable are apparent once vulnerability scoring is complete.

It is important that Roseville account for PCAs that exist in adjacent regions. PCA and capture zone information can be added to the DMS to aid in assessing wellhead protection. The DMS includes a feature that will automatically calculate wellhead protection areas if no data are available or if new well locations are proposed.

**Actions** — The plan participants will take the following actions:

- Request that the SGA, SSWD, NCMWC, and NID provide vulnerability summaries from the DWSAP to the plan participants governance structure to be used for guiding management decisions in the basin.
- Contact groundwater basin managers in other areas of the state for technical advice, effective management practices, and "lessons learned", regarding establishing wellhead protection areas.

#### 3.7.4 Protection of Recharge Areas



PCWA has evaluated surface geology within and directly adjacent to the WPCGMP boundary for the purpose of delineating areas of potentially high recharge rates (PCWA, 2005). Lincoln has also identified protection of natural recharge areas a key element of its management objectives (Lincoln, 2003). Natural recharge of area groundwater resources occurs

primarily from percolation of irrigation water, infiltration along the creeks and drainages, infiltration of precipitation, and subsurface inflow. Natural recharge rates can be maintained by keeping the major recharge areas free of impervious surfaces.

The efficiency of direct recharge through surface spreading, as opposed to natural recharge, is highly related to the infiltration rate of the surficial soil. Surface soils map for the WPCGMP area from the U.S. Department of Agriculture, showing soil classes with different infiltration rate, have been evaluated by PCWA. The best candidates would be pasture lands for stock grazing because flooding these vacant lands combined with proper land rotation will have little or no negative impacts on the agricultural economy. Native lands not reserved for habitat conservation might also be candidates. Areas along or near natural streams may be good

candidates for spreading activities due to the presence of subsurface alluvium and channels potentially useable for conveyance, although spreading may pose environmental impacts. Areas where canals, treated water systems, or possibly wastewater treatment plants are nearby may also be good candidates due to the proximity to potential water sources. Current recharge that may be of interest include the following:

- Nevada irrigation District (NID) Bear River Use of NID Canal to deliver raw surface water to recharge basins.
- Dry Creek Waste Water Treatment Plant (WWTP) Convey recycled water via Dry Creek and divert water to recharge basins.
- Dry Creek WWTP Create new diversion facilities on Dry Creek in Placer County for basin recharge from Dry Creek WWTP.

Currently the only artificial recharge site in the WPCGMP area is the Roseville ASR program, which is currently in a demonstration phase of testing. Plan participants are interested in implementing actions designed to protect future recharge areas both artificial and natural for the Roseville ASR program and other future artificial recharge sites in the WPCGMP area.

The runoff characteristics and recharge potential of the soil throughout the Lincoln area have been investigated and mapped (Saracino, Kirby, and Snow, 2003) – providing a qualitative indication of a real potential for deep percolation of surface water into the aquifer systems. Most of the soil cover across the North American Subbasin has been classified as having high runoff (low infiltration) potential, except in the vicinity of river and stream drainages (Montgomery Watson, 1995). A fairly large area surrounding Auburn Ravine, as well as Coon Creek, has been classified as having soils with moderate to high runoff potential (low to moderate infiltration potential). DWR (1995) characterizes the soil cover across the area as having dense subsoil that limits deep percolation of water applied at the surface; less dense soils occur in the vicinity of creeks such as Coon Creek and Auburn Ravine, providing better deep percolation and recharge. Boyle (1990) also identified the Markham Ravine drainage as a probable area of groundwater recharge and Spectrum-Gasch (1999) identified the Orchard Creek drainage, along with Auburn Ravine, as probable areas of significant recharge based on the inferred shallow depth to the upper aguifer zone in these areas.

**Actions** — The plan participants will take the following action:

- Develop a recharge program that identifies major natural recharge areas, quantifies current recharge rates, identifies potential sources of surface water that could be utilized for recharge, and methods for recharging groundwater.
- Identify potential activities that could adversely affect recharge quantities or qualities and formulate cohesive policies that the plan participants can use to manage or mitigate potential impacts.

#### 3.7.5 Control of the Migration and Remediation of Contaminated Groundwater

Contaminated groundwater within the WPCGMP area is limited in comparison to groundwater contamination documented in the SGA area. However, within the WPCGMP area, groundwater contamination has been documented at the Union Pacific Railroad (UPRR) Roseville Yard, Alpha Explosives, Deluxe Cleaners, Roseville Sanitary Landfill, and Western Placer Waste Management Authority Landfill Site as described in Section 2.1.3. Although not documented within this WPCGMP, other sites of concern include localized contamination from industrial/commercial point sources such as other dry cleaning facilities and numerous fuel stations throughout the WPCGMP area.

While the plan participants do not have authority or the responsibility for remediation of this contamination, they are committed to coordinating with responsible parties and regulatory agencies to stay informed on the status and disposition of known contamination in the WPCGMP area.

There are a number of historic, current, and proposed activities in and near Lincoln that have the potential to contaminate groundwater. These activities, described in Lincoln's 2003 GMP, are not the only potential sources of contamination to Lincoln's groundwater. The activities included in the report are derived from information provided by Applied Engineering and Geology (AEG, 2003). These identified activities represent locations where there has been, is, or may be certain contaminants that have caused or could cause an adverse impact to groundwater within Lincoln's Sphere of Influence. Information to develop the locations was compiled from various sources including: Placer County Division of Environmental Health, Regional Water Quality Control Board, GeoTracker Database, AEG's files, Department of Toxic Substances Control, Environmental Data Resources, consultant reports, and others.

**Actions** — The plan participants will take the following actions:

- Map and monitor known contaminated sites while coordinating with known responsible parities (if any) to develop a network of monitoring wells to act as an early warning system for public supply wells.
- If detections occur in these monitoring wells, work with the responsible parties and the potentially impacted areas of the SGA, SSWD, NCMWC and NID to develop strategies to minimize the further spread of contaminants.
- Provide the SGA, SSWD, NCMWC and others with all information on mapped contaminant plumes and LUST sites for their information in developing groundwater extraction patterns and in the siting of future production or monitoring wells.
- Inform the SGA, SSWD, NCMWC, and NID of the presence of the interface and the approximate depth of the interface below their service area for their reference when siting potential wells.
- Establish and isolate zones around known contamination plumes so as to limit the placement of production wells whose pumping might otherwise exacerbate the contamination. Add offset requirements for landfills

#### 3.7.6 Control of Saline Water Intrusion

Saline water intrusion from the Sacramento/San Joaquin River Delta (Delta) is not currently a problem in the WPCGMP area, and is not expected to become a problem in the future. Higher groundwater elevations associated with recharge from the American and Sacramento Rivers have maintained a historical positive gradient preventing significant migration of any saline water from the Delta into the Placer County region. These groundwater gradients will continue to serve to prevent any localized pumping depressions in the basin from inducing flow from the Delta into the WPCGMP area.

**Actions** — The plan participants will take the following actions:

- Track the progression, if any, of saline water bodies moving toward the east from the Delta. Because this is a highly unlikely scenario, this action will be limited to communicating with DWR's Central District Office on a biennial basis to check for significant changes in TDS concentrations in wells. DWR has a regular program of sampling water quality in select production wells throughout the adjacent Solano, San Joaquin, and Yolo counties. This will serve as an early warning system for the potential of saline water intrusion from the Delta.
- Determine and monitor the elevation of the fresh water/saline water vertical interface. Analyze for trends in sodium, chloride, and TDS that may indicate upconing of saline water.
- Observe TDS concentrations in plan participant's municipal wells that are routinely sampled under Title 22. This data will be readily available as part of the DMS and are already an on-going task for the annual review of basin conditions.
- Inform all stakeholders of the presence of the salinity interface and the approximate depth to the interface for their reference when siting potential wells. The plan participants will also ensure that Placer County EMD, along with Roseville and Lincoln, issues well permits, is aware of the interface. The plan participants will provide a map indicating the contour of the elevation of the base of fresh water in Placer County to EMD for their reference when issuing well permits.



#### 3.8 COMPONENT CATEGORY 4: GROUNDWATER SUSTAINABILITY

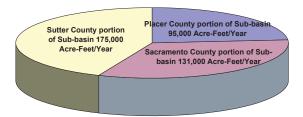
To ensure a long-term viable supply of groundwater, the plan participants are seeking to maintain the amount of groundwater stored in the basin over the long-term.

As described within the western Placer County Groundwater Storage Study, the calculated sustainable yield for the entire North American River Groundwater Subbasin is equal to 400,000 AF/year (PCWA, 2005). The Water Forum set the sustainable yield for Sacramento County portion of the subbasin at 131,000 AF/year with the remaining approximate 269,000 AF/year split 175,000 and 95,000 AF/year for Sutter and Placer County, respectively.

The "Long-term Average Sustainable Yield" definition for purposes of this WPCGMP is the average groundwater extraction calculated over a period of time commencing with the adoption of the WPCGMP. Given that agricultural groundwater extractions are estimated based on land use and crop type approximately every five years commensurate with the DWR Land Use Survey, each new year of data is added to the next and then averaged over the entire period of record. The 2000 extraction data will be added to the 2010 extraction data and so on. The "long-term" average is the average of the total extraction over the period of record (i.e. 2000 to 2010 in this example).

To ensure a sustainable resource, the plan participants continue to move forward with conjunctive use programs in the WPCGMP area including protection of natural recharge areas, pursuit of additional surface water supplies, increased use of recycled water, groundwater recharge and implementation of the WFA water conservation element. Current conjunctive management activities are described below.

Figure 3-4 – Recommended Sustainable Yield for the North American Groundwater Sub-Basin



#### 3.8.1 Conjunctive Management Activities

Two primary activities will result in an improved ability to sustain the viability of the groundwater resource for the region. Conjunctive management is an activity that includes the planning and construction of facilities to increase the available surface water supply to the area as well as to create opportunities for the banking and exchange of water with local in-basin partners after local needs are met. These partnerships will result in increased surface water and perhaps revenue to pay for some of the necessary capital improvements to help sustain the resource in a cost-effective way (Conjunctive Management Activities).

The plan participants are committed to expanded direct recharge activities and have investigated a variety of ways of recharging water into the available storage space in the basin (see **Sections 1.5.1.3., 1.5.1.4.**, and **1.5.3.2**). Opportunities for direct recharge from overlying land in the basin exist through recharge basins (e.g., abandoned aggregate mining pits or wetland habitat reserves) or through ASR. Roseville is currently implementing ASR programs where treated surface water is being injected into the groundwater and recovered through wells in the summer months and dry years. Most of the potential recharge opportunities could occur by providing raw or treated surface water or recycled water to municipal and agricultural users in-lieu of their extracting groundwater.

**Actions** — The plan participants will take the following actions:

- Continue to investigate conjunctive use opportunities within the WPCGMP area.
- Continue to investigate opportunities for the development of direct recharge facilities in addition to in-lieu recharge (e.g. injection wells or surface spreading facilities, through constructed recharge basins or in river or streambeds.

#### 3.8.2 Demand Reduction

Another way to maintain the sustainable yield of the basin and continue to achieve in-lieu recharge is by reducing demand for potable water supplies by conservation and through the use of recycled water for landscape irrigation.

Water Conservation. Roseville, as a signatory to the WFA; Lincoln, as a signatory to the California Urban Water Conservation Council's Memorandum of Understanding; and PCWA, as a signatory to both; are committed to implementing water conservation programs. As part of their respective agreements, each agency has implemented most, if not all, of the water conservation Best Management Practices (BMPs) listed in **Tables 3-2** and **3-3**.

Water Recycling. Currently Roseville and Lincoln have recycled water programs. Recycled water is currently produced at Roseville's regional WWTPs at Dry Creek and Pleasant Grove Creek. Effluent from Roseville's treatment plants is tertiary treated and meets Title 22 full body contact requirements for use of recycled water.

Roseville has made upgrades to transmission pipelines to allow more than 6 million gallon per day (MGD) of recycled water for use at area parks and golf courses. Roseville plans to expand its existing recycled water distribution system to reduce demands for potable water in the City and to minimize discharges to Dry Creek and Pleasant Grove Creek.

Wastewater from Lincoln is treated at a City-owned Wastewater Treatment and Reclamation Facility (WWTRF) located westsouthwest of the downtown area. The 3.3 MGD WWTRF began operation in 2004 and generated an initial 2.4 MGD of average dry weather flow with expansion capacity to 12 MGD in 2020. The WWTRF replaced the Waste Water Treatment Plant, which has been decommissioned. Effluent from the WWTRF undergoes treatment processes that include oxidation, coagulation, clarification, filtration, and disinfection. This level of treatment allows the effluent to meet California Department of Health services (DHS) unrestricted reuse criteria (Eco:Logic, 2001).

Wastewater effluent from the Lincoln WWTRF is utilized for irrigation on approximately 382 acres at three sites. During the non-irrigation season, effluent is stored for future use. Areas that currently receive recycled water are capable of using 1.8 MGD. Lincoln initiated a Wastewater Reclamation Study to determine the potential for reclaiming treated wastewater from the new WWTRF. According to an administrative draft, the objectives of the study are to:

- Identify potential reclamation areas near the plant.
- Review water supplies available in the area.
- Analyze applicable wastewater recycling regulations and summarize their impact on wastewater treatment facilities
- Evaluate the market for wastewater reclaiming opportunities.
- Identify and prioritize the most likely projects for wastewater reclamation.
- Actions. The plan participants will take the following actions:
- Continue to participate in their respective conservation efforts.
- Coordinate with City of Lincoln, SGA, SSWD, NCMWC, NID, and others to investigate further opportunities for expanded use of recycled water throughout the WPCGMP area.

Table 3-2: Water Conservation Best Management Practices Implemented by Roseville and PCWA

#### Water Forum Agreement **Water Conservation Best Management Practices**

- 1. Interior and exterior water audits and incentive programs for single-family residential, multi-family residual, and institutional customers
- Plumbing retrofit of Existing Residential Accounts
- Distribution System Water Audits, Leak Detection and Repair
- Non-residential Meter Retrofit
- Residential Meter Retrofit
- Large Landscape Water Audits and Incentives for Commercial,
- Industrial, Institutional, and Irrigation Accounts
  7. Landscape Water Conservation Requirements for New and Existing Commercial, Industrial, Institutional and Multifamily Developments
- **Public Information**
- School Education
- 10. Commercial and Industrial Water Conservation
- 11. Conservation Pricing for Metered Accounts
- 12. Landscape Water Conservation for New/Existing Single Family Homes
- 13. Water Waste Prohibition
- 14. Water Conservation Coordinator
- 15. Ultra-low Flush Toilet Replacement Program for Non-Residential Customers



#### 3.9 **COMPONENT CATEGORY 5: PLANNING** INTEGRATION

With the number of water purveyors and cities serving the Western Placer County area, the need to integrate water management planning on a regional scale is a high priority. Individual purveyors and cities derive their supplies from the American River, the Sacramento River, the groundwater basin, or some mix of these sources. Their infrastructure systems are mostly independent; where interconnections do exist between purveyors or cities, they are typically for emergency purposes only.

#### **Existing Integrated Planning Effort**

The plan participants, or subsets thereof, are part of various existing integrated planning efforts. These efforts include the WFA, ARB IRWMP, and Integrated Surface and Groundwater Modeling.

- Water Forum Agreement. The WFA, as described in Section X, provides a regional conjunctive use framework with commitments from individual purveyors concerning groundwater and surface water operations, including limitations on surface water diversions from the lower American River during dry years. PCWA, Roseville, and CAW are all signatories to the WFA.
- ARB IRWMP. Regional Water Authority (RWA), Freeport Regional Water Authority (FRWA), and Sacramento County Water Agency (SCWA), along with it various members and stakeholders, have developed the American River Basin (ARB) Integrated Regional

Table 3-3: Water Conservation Best Management Practices Implemented by Lincoln and PCWA

#### **California Urban Water Conservation Council's Water Conservation Best Management Practices**

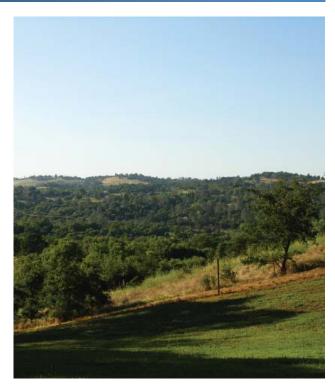
- Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers
- Residential Plumbing Retrofits
- System Water Audits, Leak Detection and Repair
- Metering With Commodity Rates
- Large Landscape Conservation Programs and Incentives
- High-efficiency Washing Machine Rebate Programs
- Public Information Programs
- School Education Programs
- Conservation Programs for Commercial, Industrial, and Institutional Accounts
- 10. Wholesale Agency Programs
- 11. Conservation Pricing
- 12. Water Conservation Coordinator
- 13. Water Waste Prohibition
- 14. Residential Ultra-Low-Flush Toilet Replacement Programs

Water Management Plan (IRWMP). The IRWMP, as described in Section 1, is a comprehensive planning document prepared on a regional scale that identifies priority water resources projects and programs with multiple benefits. The ARB IRWMP was adopted in May 2006. As projects/programs outlined in the IRWMP are implemented, the plan itself will be reviewed periodically to address changes, identify issues of concern, and provide for additional study and analysis. New projects/programs will continue to be identified and incorporated. The participants designed the IRWMP as a living document that can be readily updated as the needs of the region change over time. PCWA, Roseville, Lincoln, and CAW are involved in the ARB IRWMP through their participation in RWA.

Integrated Surface Water and Groundwater Modeling. Plan participants continue to use and build on existing groundwater models for the Western Placer County area. The Integrated Groundwater and Surface Water Model, or IGSM, is a finite element, quasi three-dimensional, numerical model that provides a comprehensive simulation of all major components of the hydrological cycle in accordance with mass balance and water budget accounting procedures. Elements of the hydrologic cycle addressed by IGSM include precipitation, runoff, groundwater recharge, evaporation, consumptive use, groundwater extraction and injection, and subsurface inflow and outflow along the model boundaries. The simulation also includes interactions between surface streams and lakes, and aquifers.



The IGSM, as a data intensive model, requires information like hydrogeology, hydrostratigraphy, land use, water use, and precipitation. An IGSM subregion, which is a group of model elements, typically represents a water district, irrigation district, city, other management areas, or unincorporated lands. Water and land use budgeting in the IGSM is performed on a subre-



gion-by-subregion basis. Two types of simulation runs are made using the: the dynamic run is mostly used for calibration of the model where changes in pumping and land use are occurring over time based on real or forecasted data; the static run is typically used for planning purposes and assists in looking at the change in the groundwater basin from one condition to another condition. Dynamic run calibrates input data using historical land use and water demand to produce a relationship in understanding how historical groundwater conditions are affected by historical hydrologic conditions. With fixed levels of land and water use, static runs are used to evaluate how the groundwater basin responds throughout a series of historical hydrologic conditions. This is typically the hydrologic period from water year 1922 to 1995.

Three IGSM applications, North American River, Sacramento County, and San Joaquin County IGSM (NARIGSM, SCNIGSM, and SJCIGSM), were developed under the American River Water Resources Investigation (ARWRI) in the 1990s to simulate groundwater conditions in the Sacramento Valley. These models joined together cover the North and South American groundwater subbasins in the Sacramento Valley Basin and part of the San Joaquin Valley Basin. These IGSM models have been updated and applied widely to regional and local groundwater studies. SGA is currently updating the portion of the SCNIGSM model that lies in northern Sacramento County.

<sup>&</sup>lt;sup>3</sup> American River Water Resources Investigation (ARWRI) was completely cooperatively between Bureau of Reclamation and DWR in the mid 1990's. Objectives of the ARWRI include meeting projected year 2030 water demands in the five counties (El Dorado, Placer, Sacramento, San Joaquin, and Sutter counties) and stabilizing the groundwater basins.

**Actions**— The plan participants will take the following action:

- Continue to move forward with existing WFA and IRWMP implementation efforts.
- Coordinate with SGA and Sutter County on regional hydrologic modeling efforts and updates.

#### 3.9.2 Potential Future Integrated Planning Efforts

Along with integrating the above mentioned existing planning efforts, plan participants recognize that there are potential future integrated planning efforts as described below.

Roseville and PCWA are already implementing integrated planning and management in the region through participation in their respective water efficiency programs (see Section 3.8.2.), and through the Roseville's recycled water program (see Section 3.8.2.).

Although not integrated, the following are other planning efforts which the plan participants will work toward integrating when appropriate.

Urban Water Management Planning. Roseville, Lincoln, PCWA, and CAW are required to prepare Urban Water Management Plans (UWMP). These plans, as defined by CWC § 10610 et seq., require public water suppliers with more than 3,000 customers or that deliver more than 3,000 AF of water annually to identify conservation and efficient water use practices to help ensure a long-term, reliable water supply. As described in Sections 1.5.1.1., 1.5.2.1., 1.5.3.4., & 1.5.4.2., Roseville, Lincoln, PCWA, and CAW have submitted updated UWMPs to DWR.

- DWSAP Program. The DWSAP Program is administered by DHS. As a first step to a complete source protection program, DHS required water systems to conduct a preliminary assessment. The assessment includes the "delineation of the area around a drinking water source through which contaminants might move and reach that drinking water supply; an inventory of PCAs that might lead to the release of microbiological or chemical contaminants within the delineated area; and a determination of the PCAs to which the drinking water source is most vulnerable (http://www.dhs.ca.gov/ps/ddwem/dwsap/overview.htm)." The assessments only apply to agencies that deliver groundwater for public drinking water supply. Roseville and Lincoln have completed DWSAPs for their existing groundwater production wells.
- Land Use Planning. Effective January 1, 2002, State law required (SB610 and SB221) that a water supplier take certain actions to confirm sufficiency of water supply as a condition to approval of some new development projects. These actions involve the development of Water Supply Assessments and Written Verifications at the request of the land use authority. These documents provide an assurance that adequate water supplies are available before a project moves forward.

**Actions**— The plan participants will take the following action:

 Integrate other existing planning efforts where appropriate or communicate these planning efforts and subsequent planning actions to each plan participant.



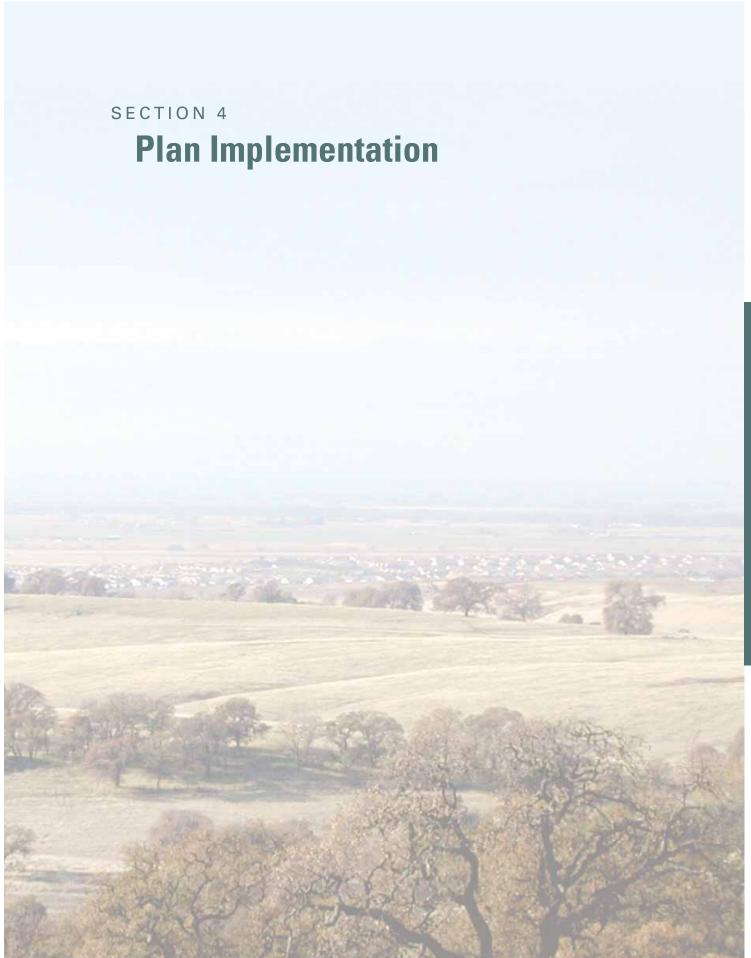
Table 3-4: Summary table listing Action Items and showing which BMOs they support.

Action Items Related to BMO	Management of the groundwater basin shall not have a significant adverse effect on	BMO No. 2. Manage Groundwater Elevations to ensure an adequate groundwater supply for backup, emergency, and peak demands without adversely impacting adjacent areas.	BMO No. 3. Participate in State and Federal Land Surface Subsidence Monitoring Programs.	Adverse Impacts	BMO No. 5. Ensure Groundwater Recharge Projects Comply with State and Federal Regulations and protect beneficial uses of groundwater.			
Component No. 1 Stakeholder Involvement								
Involving the Public	✓	✓						
Involving Other Agencies Within & Adjacent to the WPCGMP area	✓	<b>✓</b>	✓	<b>✓</b>	✓			
Using Advisory Committees	✓	✓	✓	$\checkmark$	$\checkmark$			
Developing Relationships with State and Federal Agencies	✓	✓	✓	✓	✓			
Pursuing Partnership Opportunities			✓		✓			
	I	Component No. 2 Monito	oring Program	I				
Groundwater Elevation Monitoring		✓			✓			
Groundwater Quality Monitoring	✓				$\checkmark$			
Land Surface Elevation Monitoring			✓					
Surface Water Groundwater Interaction Monitoring				✓				
Protocols for Collection of Groundwater Data	✓	✓						
Groundwater Data Management System	✓	✓	✓	✓	✓			
	T T	ponent No. 3 Groundwater	Resource Protection					
Well Construction Policies	✓							
Well Abandonment and Destruction Policies	✓							
Wellhead Protection Measures	✓							
Protection of Recharge Areas	✓							
Control of the Migration and Remediation of Contaminated Groundwater	✓							
Control of Saline Water Intrusion	✓							
		component No. 4 Groundwa	ater Sustainability	1				
Conjunctive Management Activities	✓	✓	✓	✓	✓			
Demand Reduction	✓	<b>✓</b>	✓	✓	✓			
		Component No. 5 Planni	ng Integration					
Existing Integrated Planning Efforts (Urban Water Management Planning, DWSAP Program, Land Use Planning, and Integrated Surface water and								
Groundwater Modeling)	✓	✓	✓	✓	$\checkmark$			

#### 3.10 SUMMARY OF SECTION 3

**Table 3-4** provides a summary of Section 3 for quick reference and for use in further sections. The table correlates which activities are related to one or more BMOs.

This page left blank intentionally



#### **Plan Implementation**

This section summarizes the various plan implementation activities for the WPCGMP.

**Table 4-1** summarizes the action items presented in Section 3 with an implementation schedule. Many of these actions involve coordination by the plan participants with other local, State and Federal agencies within six months of the adoption of this GMP. A few activities involve assessing trends in basin monitoring data for the purpose of determining the adequacy of the monitoring network. These assessments will be made as new monitoring data become available for review by the plan participants and results will be documented in a biennial State of the Basin report.

#### **4.1** BIENNIAL GMP IMPLEMENTATION REPORT

Plan participants will report on the progress made implementing the WPCGMP in a biennial State of the Basin report. The report will summarize groundwater conditions in the WPCGMP area and document groundwater management activities from the previous year. Much of the data used in the biennial State of the Basin report will come from the monitoring and successful implementation of the action items stated above and from data collected and potentially entered into a data management system (DMS). This report will include:

- A water budget: estimate of perennial yield;
- A description of data collection methods and frequencies;
- Identification of water quality constituents of concern with a summary and an interpretation of water quality data;
- Improved characterization of the groundwater basin through interpretation of the cross section(s);
- A summary and interpretation of groundwater elevation data;
- A summary of management actions during the period covered by the report with a discussion, supported by monitoring results, of whether these actions are achieving progress in meeting BMOs;
- Any special studies relevant to groundwater or the implementation actions; and
- A summary of any plan component changes, including the addition or modification of BMOs during the period covered by the report.

The biennial State of the Basin report will be completed by the second quarter of the first year and by the end of the first quarter every other year and will report on conditions and activities completed through December 31st of the prior year(s). The biennial State of the Basin report will try to coincide with SGA's State of the Basin reporting schedule.

#### 4.2 FUTURE REVIEW OF WPCGMP

This WPCGMP is the first regionally coordinated groundwater management effort in Western Placer County. As such, implementation of many of the identified actions will likely evolve as the WPCGMP plan participant's appointed governance body actively manages and learns more about the subbasin. Many additional actions will also be identified in the biennial report described above. The WPCGMP is therefore intended to be a living document, and it will be important to evaluate all of the



actions and objectives over time to determine how well they are meeting the overall goal of the plan. The WPCGMP governance body plans to evaluate this entire plan within five years of adoption.

4.3 FINANCING

It is envisioned that implementation of the WPCGMP, as well as many other groundwater management-related activities will be funded from a variety of sources including the cost share program established by the WPCGMP plan participants in an implementation agreement; in-kind services by other agencies; State or Federal grant programs; and local, State, and Federal partnerships. Some of the items that would likely require additional resources include:

- Monitoring for groundwater quality or elevations in non-purveyor wells.
- Customization of the DMS interface.
- Preparation of WPCGMP biennial reports.
- Updates of the overall WPCGMP.
- Update of data sets and recalibration/improvement of existing groundwater model.
- Collection of future subsidence data.
- Construction of monitoring wells where critical data gaps exist.
- Stream-aquifer interaction studies.
- Implementation of the WPCGMP including:
- Committee coordination.
- Project management.

Implementation of regional conjunctive use program.

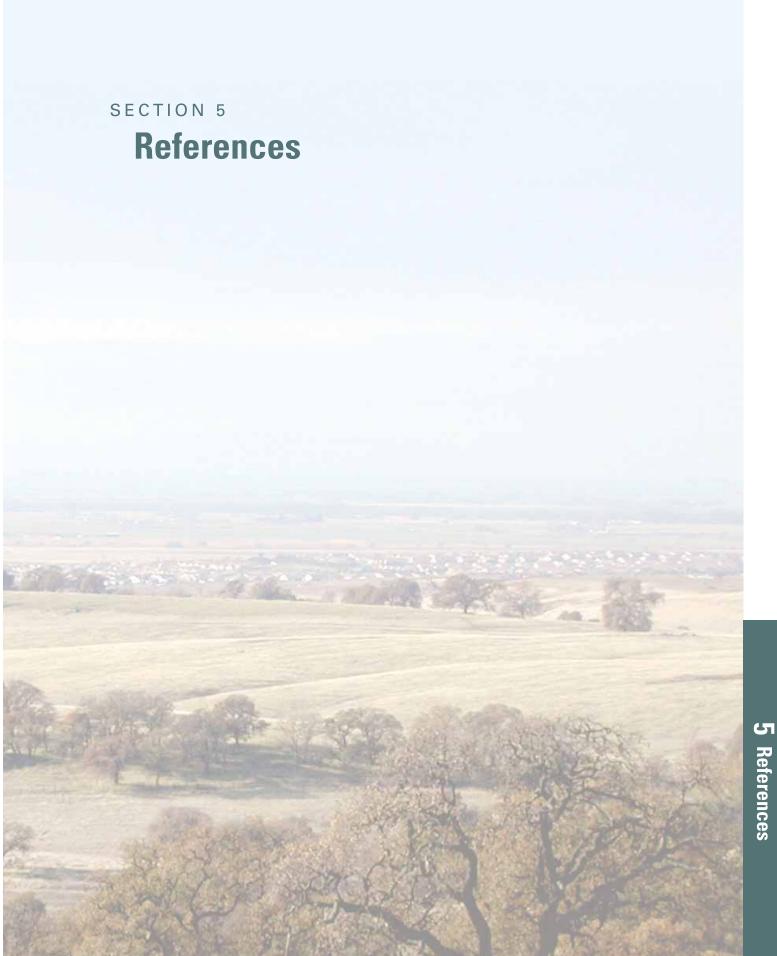
During year one of plan implementation, an estimate of some of the likely costs associated with the actions outlined in Table 4-1 will be prepared.



Table 4-1 Summary of WPCGMP Actions

Description of Action	Implementation Schedule	Reoccurance Schedule
Plan Component #1 - Stakeholder Involvement		
Involving the Public	6 months	On coinc
Continue efforts to encourage public participation as opportunities arise.  Review and take actions from a Public Outreach Plan as necessary during implementation of various	6 months	On-going On-going
aspects of the WPCGMP.  Continue to provide briefings to the Water Forum Successor Effort on WPCGMP implementation	6 months	On-going
progress.  Work with basin stakeholders to maximize outreach on WPCGMP activities, including the use of	6 months	On-going
the plan and plan participants' websites.		
Involving other Agencies adjacent to the WPCGMP and the interested parties in implementing the WPCGMP.	6 months	On-going
Provide copies of the adopted WPCGMP and subsequent annual reports to representatives from the SGA, SSWD, NCMWC, NID and other interested parties.	12 months	24 months
Meet with representatives from the SGA, SSWD, NCMWC, NID and other interested parties, as needed.	6 months	On-going
Coordinate a meeting with other self supplied groundwater pumpers in the WPCGMP area to inform them of the plan participant's management responsibilities and activities, and develop a list of other self supplied groundwater pumpers concerns and needs to the plan participant's management.	6 months	12 months
Coordinate a meeting with the agricultural groundwater pumpers in the WPCGMP area to inform them of the plan participant's management responsibilities and activities, and develop a list of agricultural groundwater pumpers concerns and needs to the plan participant's management.	6 months	12 months
Utilizing advisory committees		
Upon adoption of the WPCGMP, the TRC will periodically meet to discuss scheduling and functions to guide implementation of the plan and provide these recommendations to the WPCGMP qovernance body.	6 months	6 months
Developing relationships with State and Federal Age		
Continue existing and develop new working relationships with local, state, and federal regulatory agencies.	6 months	On-going
Pursuing Partnership Opportunities  Continue to promote partnerships that achieve both local supply reliability and achieve broader	6 months	On-going
regional and statewide benefits.  Continue to track and apply for grant opportunities to fund regional groundwater management	6 months	On-going
activities and local water infrastructure projects.  Plan Component #2 - Monitoring Program		
Groundwater Elevation Monitoring		
Coordinate with DWR and others to identify an appropriate group of wells for monitoring a Fall 2007	6 months	12 months
and future groundwater elevation measurements.  Coordinate with DWR and others to ensure that the selected wells are maintained as part of a	6 months	12 months
long-term monitoring network.  Coordinate with DWR to ensure that the timing of water level data collection by other agencies coincides within one month of DWR data collection. Currently, DWR collects water	6 months	12 months
level data in the spring and fall.  Coordinate with other agencies to ensure that needed water level elevations are collected and verify that uniform data collection protocols are used among the agencies	6 months	12 months
Consider ways to fill gaps in the monitoring well network by identifying suitable existing wells or identifying opportunities for constructing new monitoring wells.	6 months	12 months
Assess groundwater elevation trends and conditions based on the monitoring well network annually.	6 months	12 months
Assess the adequacy of the groundwater elevation monitoring network annually.  Identify a subset of monitoring wells that will be monitoring more frequently than twice annually to improve the plan participants' understanding of aquifer responses to pumping throughout the year.	6 months 6 months	12 months 12 months
Groundwater Quality Monitoring		10 "
Coordinate with cooperating agencies to verify that uniform protocols are used when collecting water quality data	6 months	12 months
Coordinate with local, state, and federal agencies to identify where wells may exist in areas with sparse groundwater quality data. Identify opportunities for collecting and analyzing water quality samples from those wells.	6 months	12 months
Assess the adequacy of the groundwater quality monitoring well network annually.	6 months	12 months
Land Surface Elevation Monitoring  Coordinate with other agencies, particularly DWR, USGS and SGA to determine if there are other suitable benchmark locations in the WPCGMP area to aid in the analysis of potential land surface subsidence	Immediately	24 months
	g	12 months
tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.	12 months	
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.	12 months	12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is		12 months 12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface	12 months	
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.	12 months 12 months 12 months 12 months	12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA	12 months 12 months 12 months 12 months	12 months On-going
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).	12 months 12 months 12 months 12 months	On-going  12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).  Provide cooperating agencies with guidelines on the collection of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water squality data developed.	12 months 12 months 12 months 12 months 6 months	On-going  12 months  On-going  On-going
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).  Provide cooperating agencies with guidelines on the collection of water quality data developed by DHS for the collection, pretreatment, storage, and transportation of water samples (DHS, 1995).  Provide training on the implementation of these SOPs to cooperating agencies, if requested.  Groundwater Data Management System (DMS).	12 months 12 months 12 months 12 months 16 months 6 months 6 months 9 months	12 months  On-going  12 months  On-going  On-going  12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Date  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).  Provide cooperating agencies with guidelines on the collection of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water samples (DHS, 1995).  Provide users staff with training and use of a Data Management System (DMS).	12 months 12 months 12 months 12 months 6 months 6 months 9 months 9 months	On-going  12 months  On-going  On-going  12 months  none 12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Corollate groundwater level data from wells in the vicinity of fiver stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data.  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).  Provide cooperating agencies with guidelines on the collection of water quality data developed by DHS for the collection, pretreatment, storage, and transportation of water samples (DHS, 1995).  Provide training on the implementation of these SOPs to cooperating agencies, if requested.  Groundwater Data Management System  Provide users staff with training and use of a Data Management System (DMS).	12 months 12 months 12 months 12 months 16 months 6 months 9 months 9 months 15 months	On-going  12 months  On-going  On-going  12 months  none 12 months
Work coorperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.  Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento rivers proximate to the WPCGMP area.  Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points  Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.  Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.  Protocols for the Collection of Groundwater Data  Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements.  This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).  Provide cooperating agencies with guidelines on the collection of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water squality data developed by DHS for the collection, pretreatment, storage, and transportation of water samples (DHS, 1995).	12 months 12 months 12 months 12 months 6 months 6 months 9 months 9 months	On-going  12 months  On-going  On-going  12 months  none 12 months

Description of Action	Implementation Schedule	Reoccurance Schedule
Plan Component #3 - Groundwater Resource Protect		Concadic
Well Construction Policies		
<ol> <li>Ensure that the SGA, SSWD, NCMWC, NID and others are provided a copy of the plan participants/Placer County's well ordinance and procedures and understand the proper well construction.</li> </ol>	6 months	none
<ol><li>Provide a copy of the most recently delineated plume extents (if any) to the SGA, SSWD, NCMWC, NID, and others.</li></ol>	6 months	none
<ol> <li>Coordinate with the SGA, SSWD, NCMWC, NID, and others to provide guidance as appropriate on well construction. Where feasible and appropriate, this could include the use of subsurface geophysical tools prior to construction of the well to assist in well design.</li> </ol>	6 months	none
Well Abandonment and Well Destruction Policies	3	
<ol> <li>Review DWR well records for all known wells in the WPCGMP area which were reported abandonment and destruction. Rate and provide a survey on the confidence of proper destruction based on the information provided on the report.</li> </ol>	6 months	none
<ol> <li>Ensure that the SGA, SSWD, NCMWC, NID, and others are provided a copy of the Roseville/ Lincoln/Placer County's code and understanding the proper destruction procedures and support implementation of these procedures.</li> </ol>	6 months	none
3. Follow up with the SGA, SSWD, NCMWC on the reported abandoned and destroyed wells to confirm the information collected from DWR. Follow up with the SGA, SSWD, NCMWC, and NID on the reported abandoned and destroyed wells to confirm the information collected from DWR.	6 months	none
4. Provide a copy of the information of abandoned and destroyed wells in Placer County to fill gaps in	6 months	none
County records (if any).  5. Meet with Placer County EMD and DWR to ensure that wells in the WPCGMP area are properly	6 months	none
abandoned or destroyed.  6. Meet with the Placer County Farm Bureau and Placer County Agricultural Commission to encourage them to help educate farmers regarding the identification and proper destruction of	6 months	none
abandoned wells.		
7. Obtain "wildcat" map from California Division of Oil and Gas to ascertain the extent of historic gas well drilling operations in the area as these wells could function as conduits to groundwater if not properly destroyed.	6 months	none
Wellhead Protection Measures		
<ol> <li>Request that the SGA, SSWD, NCMWC, and NID provide vulnerability summaries from the DWSAP to the plan participants governance structure to be used for guiding management decisions in the basin.</li> </ol>	6 months	none
Contact groundwater basin managers in other areas of the state for technical advise, effective management practices, and "lessons learned", regarding establishing wellhead protection areas.	6 months	none
Protection of Recharge Areas		
Develop a recharge program that identifies major natural recharge areas, quantifies current recharge rates, identifies potential sources of surface water that could be utilized for recharge, and methods for recharging groundwater.	24 months	none
2. Identify potential activities that could adversely affect recharge quantities or qualities and formulate	24 months	none
cohesive policies that the plan participants can use to manage or mitigate potential impacts.  Control of the mitigation and remediation of contaminated or	roundwater	
Map and monitor known contaminated sites while coordinating with known responsible parities     (if any) to develop a network of monitoring wells to act as an early warning system for public supply wells.	18 months	none
2. If detections occur in these monitoring wells, work with the responsible parties and the potentially impacted areas of the SGA, SSWD, NCMWC and NID to develop strategies to minimize the further spread of contaminants.	18 months	none
Provide the SGA, SSWD, NCMWC and others with all information on mapped contaminant plumes and LUST sites for their information in developing groundwater extraction patterns and in the siting of future production or monitoring wells.	18 months	none
4. Inform the SGA, SSWD, NCMWC, and NID of the presence of the interface and the approximate	18 months	none
depth of the interface below their service area for their reference when sitting potential wells.  5. Establish and isolate zones around known contamination plumes so as to limit the placement of production wells whose pumping might otherwise exacerbate the contamination. Add offset	18 months	none
requirements for landfills.  Control of Saline Water Intrusion		
1. Track the progression, if any, of saline water bodies moving toward the east from the Delta.  Because this is a highly unlikely scenario, this action will be limited to communicating with  DWR's Central District Office on a biennial basis to check for significant changes in TDS  concentrations in wells. DWR has a regular program of sampling water quality in select  production wells throughout the adjacent Solano, San Joaquin, and Yolo counties. This will  serve as an early warning system for the potential of saline water intrusion from the Delta.	12 months	24 months
Determine and monitor the elevation of the fresh water/saline water vertical interface. Analyze for trends in sodium, chloride, and TDS that may indicate upconing of saline water.	6 months	12 months
Observe TDS concentrations in plan participant's municipal wells that are routinely sampled under Title 22. This data will be readily available as part of the DMS and are already an on-going	6 months	12 months
task for the annual review of basin conditions.  I. Inform all stakeholders of the presence of the salinity interface and the approximate depth to the interface for their reference when siting potential wells. The plan participants will also ensure that Placer County EMD, along with Roseville and Lincoln, issues well permits, is aware of the interface. The plan participants will provide a map indicating the contour of the elevation of the base of fresh water in Placer County to EMD for their reference when issuing well permits.	12 months	12 months
Plan Component #4 - Groundwater Sustainability Conjunctive Management Activities	/	
1. Continue to investigate conjunctive use opportunities within the WPCGMP area.	6 months	On-going
Continue to investigate opportunities for the development of direct recharge facilities in addition to in-lieu recharge (e.g. injection wells or surface spreading facilities, through constructed recharge basins or in river or streambeds.	6 months	On-going
Demand Reduction		
Continue to participate in their respective conservation efforts.     Coordinate with City of Lincoln, SGA, SSWD, NCMWC, NID, and others to investigate further opportunities for expanded use of recycled water throughout the WPCGMP area.	12 months 12 months	On-going On-going
Plan Component #5 - Planning Integration		
Existing Integrated Planning Efforts  Coordinate with SCA and Sutter County on regional hydrologic modeling efforts and undates	0 months	24 mantha
Coordinate with SGA and Sutter County on regional hydrologic modeling efforts and updates.	9 months	24 months



#### SECTION 5

#### References

Applied Engineering and Geology (AEG, 2003)

Archibald & Wallberg with Montgomery Watson, 1995. Sacramento River Watershed Sanitary Survey Report. December

Boyle (1990). Airport Vicinity Groundwater Investigation, City of Lincoln, Draft Summary Report.

California American Water (CAW) West Placer Water System Comprehensive Planning Study, 2006.

California Department of Water Resources (DWR). 2003. California's Water. Bulletin 118-Updated 2003. October 2003.

California Groundwater Management Guidelines (Groundwater Resources Association of California, Second Edition, 2005).

California Department of Toxic Substances Control (DTSC). "Site Mitigation and Brownfield Reuse Program Database."

[http://www.dtsc.ca.gov/database/Calsites/Index.cfm] (5 Oct. 2005).

Central Valley Regional Water Quality Control Board (CVRWQB). 2005. "Leaking Underground Storage Tank Quarterly Report."

[http://www.waterboards.ca.gov/centralvalley/available\_documents/index. html#anchor617473] (5 Oct. 2005).

Central Valley Regional Water Quality Control Board. 2002. "Cleanup and Abatement Order No. R5-2002-0719."

[http://www.waterboards.ca.gov/centralvalley/adopted\_orders/Placer/R5-2002-0719-enf.pdf] (6 Oct. 2005).

CH2M Hill, 2005. Final Semi-Annual Water Quality Monitoring Report. July.

City of Roseville Website. http://www.roseville.ca.us/ed/demographics/roseville\_at a glance/default.asp

Domagalski, J.L., Knifong, D.L., Dileanis, P.D., Brown, L.R., May, J.T., Connor, Valerie, and Alpers, C.N., 2000, Water Quality in the Sacramento River Basin, California,1994—98: U.S. Geological Survey Circular 1215, 36 p., on-line at http://pubs.water.usgs.gov/circ1215/

Eco:Logic (2001). City of Lincoln Wastewater Reclamation Study, Administrative Draft.

Environmental Science Associates (ESA) (2006), City of Lincoln General Plan Update Draft Environmental Impact Report, October 2006.

Lincoln (2004) City of Lincoln Reclamation Master Plan, December 2004.

Lincoln (2005) City of Lincoln Urban Water Management Plan, November 22, 2005.

Lincoln (2005) City of Lincoln Annual Water Quality Report.

Montgomery Watson (1995). Northern American River Service Area Groundwater model, Model Development and Basin Groundwater Management, Final Report.

Montgomery Watson with Archibald & Wallberg, 2005. Sacramento River Watershed Sanitary Survey Report. December

MWH (2002). Sacramento Groundwater Authority, Data Management System, Task 4 Summary Memorandum; Evaluate Accuracy and Reliability of Groundwater Data, January.

PCWA, 2005. West Placer County Groundwater Storage Study-Final Report, December.

Placer County and Sacramento County, 2003. Dry Creek Watershed Coordinated Resource Management Plan. December

Placer County Planning Department-Natural Resources Division, 2002. The Auburn Ravine/Coon Creek Ecosystem Restoration Plan. June.

Sacramento Area council of Governments (SACOG).

Preferred Blueprint Alternative. Sacramento Region Blueprint:
Transportation/Land Use Study.

http://www.sacregionblueprint.org. 17 April 2006.

Sacramento Groundwater Authority (2003). Groundwater Management Plan, December 2003.

Saracino, Kirby, and Snow. 2003. City of Lincoln Groundwater Management Plan. November.

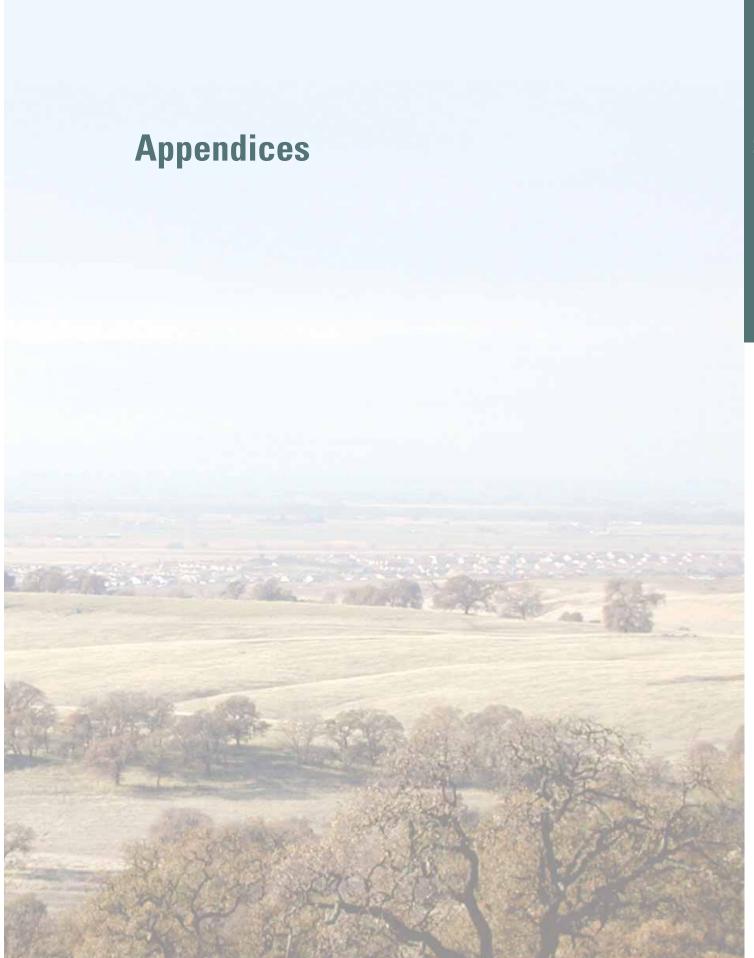
South Sutter Water District. 1997. Groundwater Management Plan. September.

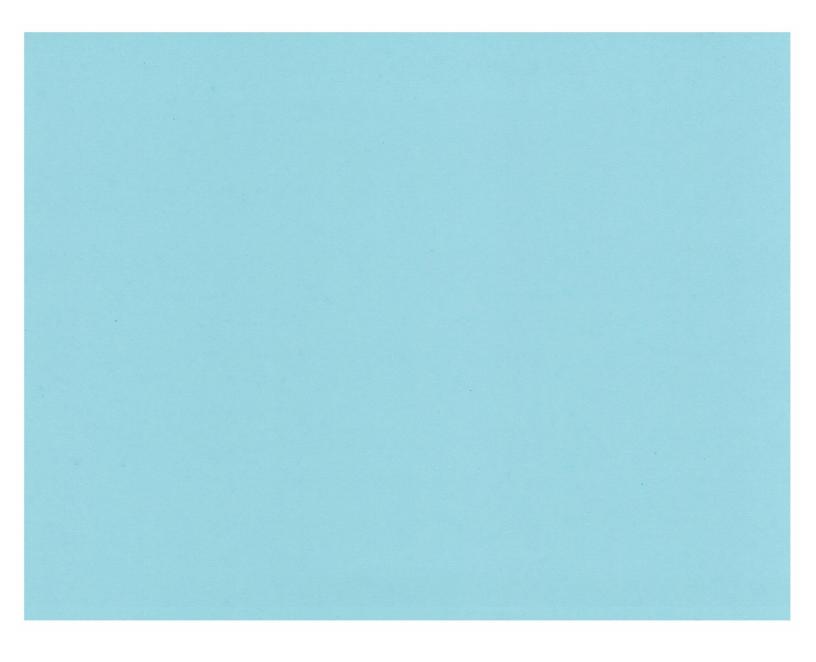
Spectrum-Gasch (1999). Geological and Geophysical Investigation of the Groundwater Resource City of Lincoln, Sphere of Influence.

U.S. Army Corps of Engineers. "Titan Home Page." [http://www.titani-a.org/] (6 Oct. 2005).

USEPA. "Region 9 Cleanup Sites in California Website."

[http://www.epa.gov/region09/cleanup/california.html] (5 Oct. 2005).





## APPENDIX A

# WPCGMP Participants' Public Notices

NO 573 PUBLIC NOTICE

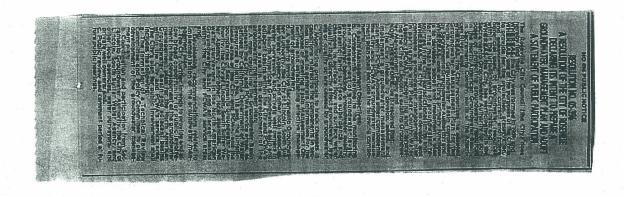
# NOTICE OF ROSEVILLE OTY COUNCIL MEETING AGENDA ITEM FOR RESOLUTION OF INTENTION TO PREPARE A GROUNDWATER MANAGEMENT PLAN

The Roseville Environmental Utilities Department will ask the Roseville City Coundl to consider the adoption of a resolution of intention to prepare a Groundwater Management Plan (GMP) with Placer County Water Agency (PCWA) at its regularly scheduled 7:00 p.m., August 3, 2005 meeting. This matter will be included as an item on the Roseville City Coundl meeting agenda. The public is invited to attend the meeting will deconducted at the Coundl Chambers located at City Hall, 311 Vernon Street, Roseville CA.

The City of Roseville (City) has developed and uses groundwater as an integral part of its water supply portfolio. Although the City relies primarily on surface water, it occasionally uses groundwater to meet peak demands (particularly during summer months). Additionally, groundwater is a reliable supply for the City during drought. The objective of the City during and enhance the management of the groundwater resource. For more information on the preparation of the GMP, please contact the City's Project Manger, Mr. Ken Glotzbach, City of Roseville Environmental Utilities Department, at (916) 746-1751.

\$597.08 = 2 Fridays

R3 Sacramento Bec 11/18/05



#### Milestones

will get their chance to help at a Bloodsource Blood Drive, held from 11 a.m. to 5 p.m. loday at the United Artists movie theater, 520 North Sumias Ava For information call (800) 995-4420 extension 11014

A4 Saturday, July 7, 2007

professional musicians playing the music of Vienna's Waltz King, Johann Strauss, Jr. The event takes place from

Recreation is offering a trip to the Strauss Festival in Elk Grove. The show features elegantly costumed dancers and

of the Mare Island shippard, Cofficer's Chapel and Cofficer's Chapel and Cofficer's Row Manaions and the genders. There will be a sub an inte genders. There will be a sub and the work of the cofficer's constant of the cofficer's Cow Manaions and Cofficer's Cow Manaions and Cofficer's Company of the Cofficer's Company of the Cofficer's Coff

#### Placer County Groundwater Management Plan Intent to Review and Adopt Proposed Western PUBLIC NOTICE

The Press-Tribune

Hall, 311 Vernon Street, Roseville, CA. the cost of reproduction at the Office of the City Clerk, City of Roseville, located at City proposed WPCGMP can be accessed online at www.wpcgmp.org or may be obtained for City has released a DRAFT version of the WPCGMP for public review. A copy of the of the proposed Western Placer County Groundwater Management Plan (WPCGMP). The The City of Roseville (City) will hold a public hearing to review and consider the adoption

meeting scheduled for July 18, 2007. Any protests by landowners in the area covered including the close of the public comment portion of this agenda item at the City Council Roseville, CA. The public is invited to provide comments on the WPCMP up to and of the City Council held in Council Chambers located at City Hall, 311 Vernon Street, The public hearing will be on July 18, 2007 at 7:00 p.m. at the regularly scheduled  $\,$  meeting

resources in the western portion of the County. The overall goal of the WPCGMP is to The WPCGMP outlines a series of actions to protect Roseville's crucial groundwater comment portion of this agenda item at the July 18, 2007 7:00 p.m. meeting of the City 10753.6 and be provided to the City of Roseville, in writing, prior to the close of the public under the WPCGMP must comply with the requirements set forth in Water Code section

implemented for the purpose of maintaining the overall health of the underlying management objectives and five primary plan components identifying specific actions to be within the WPCMGP area. To achieve this goal, the WPCGMP sets forth five backup, emergency, and peak demands without adversely affecting other groundwater uses maintain water quality and to ensure the long term availability of groundwater to meet

kglotzbach@roseville.ca.us. For more information please contact Ken Glotzbach at (916) 746-1751 or groundwater basin.

versity to accretish by, and is a member of, the Western Association of Schools and Colleges, and closelying the disclosely programs are accretished by the California Communical in Fugicing Cantonicians. SACRAMENTO VALLEY CHAPMAN UNIVERSITY COLLEGE Undergraduate, graduate and certificate programs in: Carest Councising, Conjuet Indoor Seams, Chimical, Jestice, Health Administration, Reading Senforce Management, Haman Resourcea, Liberal Subade, Chimistorial Leudership, Psychology, and Social Science, Charleston Reading Councilla Classes start Monday, August 20. bns gnileem nollermoini ne fe ylqqA leef nolleciliqqe G&S edf eview il'ew or by phone 866-CHAPMAN. RSVP online at www.chapman.edu/sv .m.q Y-8 Tuesday, July 10 & 17 Yuba Clty Campus el & ST VIUL (VBb2)UIT Bles II Alor Acosolic Holigiciles be here? **υογ JliW** We'll be discussing your future. - Sacramento Valley Information Meetings mos.tqəllivəsor.www

Weimar resident Cynthia Meikle said she and her hus-

Hall, 311 Vernon Street, Roseville, CA.

III & TUT WAY.

coalition volunteers are currently focusing their efforts on Cruisin' for veh narder. The Haskins and

leitoris on Circum row Down Syndrome, a oar show and family friendly vevnt that will be held at the Cold Country The car show, in its friggrounds in Auburn todoy. The car show, in its reason the consily the crasson the consily the vexists in the first place, exists in the first place, exists in the first place, thashin said. Kahla

proceeds to Haskin as friend and Folsom High graduate, planned and produced the inaugural car show and donated the Campbell, a family

something to raise awareness. In everything we do, we try to raise awareness."

The inaugural show prosinch of the state start-up money for the

Malachi Haskin's parents say their son is capable of accomplishing the recomplishing the recomplishing the recomplishing the

focus on the positive instead of dwelling on the negative." Haskin said she wishes port.
"The one comment we get unine and time and time again, why have been again, why they keep coming back, is so positive," Haskin said. "People tell me I'm not being: "Be so positive," Haskin said. "The some solities, is so positive in the positive in

> affected by Down syn-drome in Placer County and beyond. to reach out to families

TOOK of (Windern); he's an absolute loy, he's the love of our lives," Haskin said, "That was the coalition, because there are other families like us out there." "I look at (Malachi),

worked with children ilke us out there."

Haskin operates the coalition out of the family's Roseville family's Roseville home. Haskin has a bachelor's degree in child development and worked with children worked with children worked with children

Malachi was born I just real-ly felt this is what I was called to do," she said. "I just felt like God put it in my with disabilities for more than a decade before Malachi was born. "I loved it, and after the contract of the c

The coalition is designed to educate the public and to provide charitable resources,

Placer County Groundwater Management Plan Intent to Review and Adopt Proposed Western

the cost of reproduction at the Office of the City Clerk, City of Roseville, located at City proposed WPCCMP can be accessed online at www.wpcgmp.org or may be obtained for City has released a DRAFT version of the WPCGMP for public review. A copy of the of the proposed Western Placer County Groundwater Management Plan (WPCGMP). The The City of Roseville (City) will hold a public hearing to review and consider the adoption

comment portion of this agenda item at the July 18, 2007 7:00 p.m. meeting of the City 10753.6 and be provided to the City of Roseville, in writing, prior to the close of the public under the WPCGMP must comply with the requirements set forth in Water Code section meeting scheduled for July 18, 2007. Any protests by landowners in the area covered including the close of the public comment portion of this agenda item at the City Council Roseville, CA. The public is invited to provide comments on the WPCMP up to and of the City Council held in Council Chambers located at City Hall, 311 Vernon Street, The public hearing will be on July 18, 2007 at 7:00 p.m. at the regularly scheduled meeting

implemented for the purpose of maintaining the overall health of the underlying management objectives and five primary plan components identifying specific actions to be within the WPCMGP area. To achieve this goal, the WPCGMP sets forth five backup, emergency, and peak demands without adversely affecting other groundwater uses maintain water quality and to ensure the long term availability of groundwater to meet resources in the western portion of the County. The overall goal of the WPCGMP is to The WPCGMP outlines a series of actions to protect Roseville's crucial groundwater

For more information please contact Ken Glotzbach at (916) 746-1751 or

kglotzbach@roseville.ca.us.

Some restrictions may apply Redeemable at all locations With Coupon Only, Limit 2 hearing sids per person. Expires 7/6/07. intelahear.com new products, visit For information on ecasing or replating.) (Does not include and all models. Repair of all makes HEARING AID REPAIR

McDonald Hearing Aid Center

433 F Street • Lincoln • 916.434.9901 (By Appointment Only) 2344 Butano Drive, Ste C-3 · Sacramento · 916.239.4445 106 N Sunrise Ave. Ste C3 • Roseville • 916.786.8040 1400 X Street, Ste 300 · Sacramento · 916.444.5537

.:onbiun

PUBLIC NOTICE

## RESOLUTION NO. 07-426

S.

# ADOPTING THE WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

WHEREAS, on August 3, 2005, the City Council authorized staff to prepare a groundwater management plan; and  $\,$ 

WHEREAS, in order to promote regionally consistent and cooperative groundwater management goals and objectives, staff proposed development of a joint plan with Placer County Water Agency; and

WHEREAS, the Ground Water Management Plan was prepared in accordance with the California Groundwater Management Act, AB3030 and SB 1938; and

WHEREAS, the City Council has reviewed the proposed Western Placer County Groundwater Management Plan;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Roseville hereby adopts the Western Placer County Groundwater Management Plan, pursuant to California Water Code Section 10753.

PASSED AND ADOPTED by the Council of the City of Roseville this 1st day August \_\_\_, 2007, by the following vote on roll call:

AYES COUNCILMEMBERS: Allard, Roccucci, Garcia, Garbolino, Gray

COUNCILMEMBERS: None

COUNCILIVIEIVIBENG.

COUNCILMEMBERS:

None

NOES

ABSENT

TTEST:

Page 462 of 534

Auburn, CA 95604 PO BOX 6570 Placer County Water Agency

DECLARATION OF PUBLICATION (C.C.P. 2015.5)

COUNTY OF SACRAMENTO

STATE OF CALIFORNIA

Sacramento, State of California, under the date of September 26, 1994, Action No. 379071; that the notice of thereof on the following dates, to wit: which the annexed is a printed copy, ed in the above entitled matter. I am the printer and principal clerk of the I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen thereof and not in any supplement a newspaper of general circulation by has been published in each issue the Superior Court of the County of said newspaper has been adjudged State of California, daily, for which Sacramento, County of Sacramento, printed and published in the City of publisher of The Sacramento Bee, years, and not a party to or interest

October 19, 26, 2006

October 19, 24, 2006

executed at Sacramento, California, on October 26, 2006. correct and that this declaration was perjury that the foregoing is true and I certify (or declare) under penalty of

(Signature)

HOTICE OF PLACES, COUNTY WATER AGENCY
EQUAD OF DIRECTORS MEDIUM SAPANA TEM,
FOR RECOLLINDO OF RUTBETOR TO PREPARE
AN UPDATED WEST FLACE GOUNDWATER
MANAGEMBET PLAN NO 302 PUBLIC NOTICE

Page 463 of 534

Auburn, CA 95604 Placer County Water Agency PO BOX 6570

DECLARATION OF PUBLICATION (C.C.P. 2015.5)

COUNTY OF SACRAMENTO

STATE OF CALIFORNIA

a resident of the County aforesaid; has been published in each issue which the annexed is a printed copy, Action No. 379071; that the notice of Sacramento, State of California, under the date of September 26, 1994, the Superior Court of the County of a newspaper of general circulation by said newspaper has been adjudged State of California, daily, for which publisher of The Sacramento Bee, the printer and principal clerk of the ed in the above entitled matter. I am years, and not a party to or interest I am a citizen of the United States and thereof on the following dates, to wit: thereof and not in any supplement Sacramento, County of Sacramento, printed and published in the City of am over the age of eighteen

November 9, 16, 2006

perjury that the foregoing is true and correct and that this declaration was executed at Sacramento, California. on November 16, 2006. I certify (or declare) under penalty of

bry (Signaturé)

> The threshis insulinton was duly pieces at realing of the Board of the Pieces country based on the Pieces of the Pieces country based on the Pieces of the P Signed and approved by me after, its passage this and day of Nevember 2004, on the second of Nevember 2004, on the second of the NOES DIRECTORS: None with the City of Roseylle, the City of Lucion, and blace to administration with the City of Roseylle, the City of Lucion, and blace to the City of Roseylle, the City of Lucion, and the Roseylle, the City of Lucion, and the Roseylle, the City of Lucion, and the Roseylle, the City of Lucion and the Roseylle, the City of Lucion and the Roseylle, the City of City of Roseylle, the City of Roseylle, WHEREAS, the agency-edopred a West Placer Groundwerer wanagement Plan on October 6, 1998 and updated this plan on New Yember 4, 2003, and HIEREAS, and of the responsibilities of Placer County Wetor.
> Agency (Agenty) is to provide for surfainable use of groundwater
> resources within Placer County, and ATTEST Clerk. Board of Directors Placer County Water Agoncy ABSENT DIRECTORS: Pauline Roccucci rectors of the Placer County Water Approx That By the Board of Di-WHEREAS, the Agency needs to undate the 2003 black in the current water resources, planning in westing it places County and less practices of its indirection water Resources. Plan eccepted on Autoput 17, 2006, and needs on Autoput 17, 2006, and needs on Autoput 17, 2006, and needs on Autoput 18, 2006, and nee RESOLUTION NO. 06 - 45 OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY DECLARING ITS INTENT TO UPDATE ITS WEST, PLACER GROUNDWATER MANUSCHART PLAN AND JODOPT A STATEMBIT The Agency vurther interest to exculate for annual allowing the control of the co The Board intends to prepare, adopt, and lipidate the weather Management Plan Amnor of the Control of Control of the Control of Cont OF PUBLIC PARTICIPATION NO 433 PUBLIC NOTICE Placer County Water Agency

> > Page 464 of 534

# PROOF OF PUBLICATION

## STATE OF CALIFORNIA County of Placer

newspaper of general circulation, which is printed and published in the City of Auburn, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of May 26, 1952 (Case Number 17407). The notice, of which the I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Auburn Journal, a supplement thereof on the following dates, to-wit: and entire issue of said newspaper and not in any than nonpareil) has been published in each regular attached is a printed copy (set in type not smaller

In the year of 2006 November 9, 16

is true and correct I certify, under penalty of perjury, that the foregoing

Signature

Dated in Auburn, California

November 16, 2006

Sexattached

The following space is reserved for the County Clerk's filing stamp

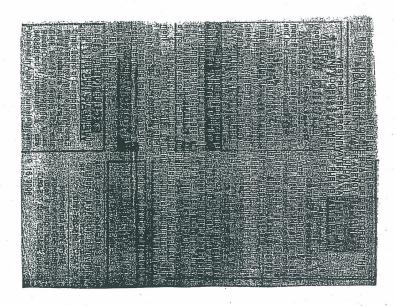
PROOF OF PUBLICATION OF

1614290 16142480

Public Notice

PROOF OF PUBLICATION THE AUBURN JOURNAL 1030 High St. P.O. Box 5910 Auburn, CA 95604-5910





# PROOF OF PUBLICATION

## STATE OF CALIFORNIA County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Auburn Journal, a newspaper of general circulation, which is printed and published in the City of Auburn, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of May 26, 1952 (Case Number 17407). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

October 19

26

In the year of 2006

I certify, under penalty of perjury, that the foregoing is true and correct.

Signature

Dated in Auburn, California
October 26, 2006

Clerk's filing stamp

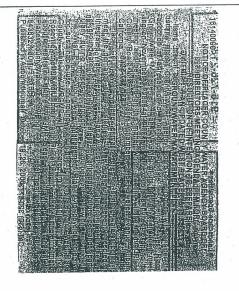
The following space is reserved for the County

PROOF OF PUBLICATION OF

16140090

Notice of Placer County Water Agency Board of

Directors Meeting Groundwater Mgt. Plan



PROOF OF PUBLICATION
THE AUBURN JOURNAL
1030 High St. P.O. Box 5910
Auburn, CA 95604-5910

## D 452 PUBLIC NOTICE

## tent to Review and Consider Adoption of An Updated West Placer County Groundwater Management Plan

The Placer County Water Agency (Agency) will hold a public hearing to review and consider the adoption of an updated west Placer County Groundwater Management Plan (WPCGMP). The Agency has released a DRAFT version of the updated WPCGMP for public review. A copy of the proposed updated WPCGMP can be accessed online at www.pcwa.net or may be obtained for the cost of reproduction at the Agency's Business Center located at 144 Ferguson Road in Auburn, CA.

The public hearing will be on August 16, 2007 at 2:00 p.m., at the regularly scheduled meeting of the Agency Board of Directors located at the Business Center. The public is invited to provide comments on the probles dupdated where the public comments on the probles dupdated where the public comment portion of this agendate metal the Board meeting scheduled for August 16, 2007. Any profest by landowners in the area covered under the WPCGMP in the area covered under the WPCGMP in California Warter Code Section 10/23,6 and be provided to the Placer County Water Agency, in writing, phor to the dose of the public comment portion of this agendatem at the August 6, 2007 2:00 pm, meeting of the Board of Directors.

The reasons for updating the Agency's West Placer County Groundwater Management Plan are to reflect progress made towards conjunctive use in west Placer County and to establish an inter-agency document that aligns policy. This plan was prepared in partnership with the City of Rosewille, City of Lincoln, and California American Water Company. In summary, the proposed WPCGWP outlines a series of actions to project crudal groundwater resources in the western portion of the County. The overall goal of the WPCGWP is to maintain water guality and to ensure the long term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGWP area. To achieve this goal, the updated WPCGWP area for achieve this goal, the updated western policy and post deficitions of the propose of maintain groundwater deficies of the WPCGWP sets forth five management objectives and five primary plan components identifying specific actions to the underlying groundwater basin, actions of the WPCGWP will be implemented in partnership with the participants of the plan development.

W.

For more information please contact TonyFirenzi at (530) 823-4886 or iffrenzi@cova.net.
2Ti August 2, 9, 2007

16189229

PUBLIC NOTICE

Intent to Review and Consider Adoption of An Updated West Placer County Groundwater Management Plan

WPCGMP can be accessed online at www.pcwa.net or may be obtained for the and consider the adoption of an updated West Placer County Groundwater and consider the adoption of an updated West Placer County Groundwater Management Plan (WPCGMP). The Agency has released a IRAFT version of the updated The Placer County Water Agency (Agency) will hold a public hearing to review cost of reproduction at the Agency's Business Center located at 144 Ferguson

The public hearing will be on August 16, 2007 at 2:00 p.m. at the regularly Scheduled meeting of the Agency Board of Directors located at the Business scheduled meeting of the Agency Board of Directors located at the Business Center. The public is invited to provide comments on the proposed updated WPCMP up to and including the close of the public comment portion of this was agenda item at the Board meeting scheduled for August 16, 2007. Any protests agenda item at the Board meeting scheduled for August 16, 2007. Any protests agenda item at the Board forth in California Water Code Section 1075.36 and be requirements set forth in California Water Agency, in writing, prior to the close of the provided to the Placer County Water Agency, in writing, prior to the close of the public comment portion of this agenda item at the August 16, 2007 2:00 p.m. meeting of the Board of Directors. Road in Auburn, CA.

California-American Water Company. In summary, the proposed WPCGMP outlines a series of actions to protect crucial groundwater resources in the western portion of the County. The overall goal of the WPCGMP is to maintain water quality and to ensure the long term availability of groundwater to meet Management Plan are to reflect progress made towards conjunctive use in west Placer County and to establish an inter-Agency document that aligns policy. This plan was prepared in partnership with the City of Roseville, City of Lincoln, and VPCGMP sets forth five management objectives and five primary plan components identifying specific actions to be implemented for the purpose of maintaining the overall health of the underlying groundwater basin. Actions of the VPCGMP will be implemented in partnership with the participants of the backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCMGP area. To achieve this goal, the updated The reasons for updating the Agency's West Placer County Groundwater

For more information please contact Tony Firenzi at (530) 823-4886 or plan development firenzi@pcwa.net

Published in Auburn Journal: August 2, 9, 2007

http://www.goldcountryclassifieds.com/classifieds.php?cname=announcements

8/2/2007

#### AGENDA

## BOARD OF DIRECTORS PLACER COUNTY WATER AGENCY

September 6, 2007 2:00 p.m., Regular Meeting

Placer County Water Agency Business Center American River Room 144 Ferguson Road Auburn, California

## Members of the Board of Directors:

LOWELL JARVIS, District 3
Chairman of the Board

GRAY ALLEN, District 1 ALEX FERREIRA, District 2

\*\*\*\*

n of the Board

MIKE LEE, District 4, Vice Chairman

OTIS WOLLAN, District 5

CALL TO ORDER

Þ

- Roll Call
   Pledge of Alle
- Pledge of Allegiance Introductions & Presentations

m

- PUBLIC COMMENT: This is the time for any member of the public to address the Board of Directors on any matter not on the agenda that is within the subject matter jurisdiction of the Agency. Directors and Agency staff are limited by law to brief responses and clarifying questions to such comments and Directors may request staff to report back to the Board concerning such matter and direct staff to put the matter on a future agenda. Any item that is on this agenda may be addressed by the public during the Board's consideration of that item. Comments shall be limited to *five minutes* per person, or such other time limit as may be imposed by the Chair, in order to enable the Board to complete its agenda within a reasonable period of time.
- REPORTS BY DEPARTMENT HEADS

0.0

AGENDA CHANGES AND REVIEW

September 6, 2007 Regular Meeting

- Approve and file:
- August 2, 2007, minutes.
- Check Register 07-16 expenses disbursed.
- Matters related to the Board of Directors as follows: Budget transfers, as recommended by the Director of Financial that may be included as part of specific items that follow. Services. See attached and other non-routine budget transfers
- Expenses for previous months;

<u>a</u>

9

- $\omega \nu$ Anticipated costs of transportation, lodging, and associated fees for travel outside the State of California to be paid by the Agency; Anticipated expenses in excess of \$500.00; none at this time. none at this time.
- General Manager's expense reimbursement claim summary.
- N ω with Keith K. Clayton. Approve Quitolaim of Easement for portion of the Sugarloaf Canal pipe Plant Grading project, declare the project categorically exempt from CEQA Receive Report on Review for CEQA for Lakeshore Water Treatment
- Approve Right of Way and Easement Agreement and payment of \$5,000 to Mary O. Dutra for the easements for the Foothill Raw Water Supply and authorize the filing of the Notice of Exemption. Pipeline project.

4

name to Association of California Water Agencies for the National Water Approve the Submittal of PCWA General Manager David A. Breninger's Resources Association Board of Directors for the term 2008-09

5

Approve passage of Resolution No. 07-\_\_ adopting the updated West Placer County Groundwater Management Plan.

0

7

- Adopt Resolution No. 07-\_\_ initiating proceedings for annexation of Dry Creek Elementary School to Zone No. 1 and setting a public hearing thereon.
- Receive and file PCWA's bond rating upgrade dated July 2007

φ

#### Award:

- Approve the following with Black and Veatch:
- a Engineering Services Contract for various Middle Betterments. Fork Project
- to exceed \$25,740.00. Task Order No. 2007-01 for Middle Fork Betterments in an amount not
- in Approve Settlement Agreement between Placer County Water Agency and Sacramento Municipal Utility District and authorize General Manager to send letters to the State Water Resources Control Board and to the Federal Energy Regulatory Commission as provided in the agreement.

#### Existing:

- ω Approve Amendment No. One with Starr Consulting for treatment plant water quality consulting services for the Auburn Water Treatment Plant project in an amount not to exceed \$19,690.00. project, Ophir WTP Pipelines project, and the Sacramento River Diversion
- Approve the following for the Foothill Raw Water Supply Pump Station project, Contract #2005-09, with Pacific Mechanical Corporation

4

- Contract Change Order No. Twenty One in the increased amount of \$46,839.00.
- Progress Pay Estimate No. Seventeen in the amount of \$3,462,542.05.
- Approve Amendment No. One to the On-call Supervisory and Data Acquisition Services Consulting Contract with MCC Control Systems, LP in an amount not to exceed \$100,000.00.

5

<u>ი</u>

- Approve Change Order No. 1 for Contract P-06-02 Paving Services, Intermountain Slurry Seal, Inc., to extend the contract period through September 12, 2008, with a possible price increase, not to exceed 5%.
- Approve Amendment No. Three to contract with Richard C. Harlan for fiveyear safety inspections and reports for French Meadows and Hell Hole Dams

7.

## WATER AVAILABILITY AND WATER SUPPLY

Ω

- Zone 1 water service; take action as appropriate.
- Treated Water
- Four Facilities Agreements (FA) for a total of 7.5 acre feet or 11.5 equivalent dwelling units (EDUs)
- FA 2193, Sierra de Montserrat, Amendment No. Two, Loomis
- FA 2223, Wade Simmons Waterline, Revision No. 1, Newcastle
- FA 2284, Jack in the Box, Rocklin
- FA 2392, Stanford Plaza Lot 58 Phase 1B, Rocklin
- Single Connections (In fill): Four applications for a total of 2.6 acre feet or 4.0 EDUs
- io Zone 4 water service; take action as appropriate.

Raw Water: None

- Treated Water
- 1) Two Facilities Agreements (FA) for a total of 9.2 acre feet or 14.0 FA 2287, Timilick Phase 2 Residential (formerly Eaglewood EDUs
- FA 2342, Martis Camp Unit No. 2, (formerly Siller Ranch), Phase 2 Residential), Revision No. 1, Martis Valley Amendment No. 1, Martis Valley
- ω appropriate. Requests for response from Agency on water availability; take action as
- SB 221 (tentative map)
  SB 610 (environmental process)
  All other requests or information
- Reports and response on water resource policy, planning management issues and interests; take action as appropriate: and

4

- Water rights and contracts Land use and water policy
- Water supply, service, and infrastructure system
- Water use efficiency and conservation American River Pump Station Project

- Sacramento River Diversion Project
- Regional water matters
- Delta and State water matters

# MIDDLE FORK AMERICAN RIVER PROJECT, (FERC PROJECT 2079). RELICENSING PROGRAM

工

- Report on relicensing process, schedule, and activities; take action as appropriate.
- Report on financial matters and services; take action as appropriate

#### GENERAL ITEMS

- Receive report on Renewal and Replacement Projects and Water Connection Charge Projects to be undertaken within the next five years.

  Take action as appropriate.
- Consider the following for Agency's intention to undertake Renewal and Replacement and Water Connection Charge Projects; take action as appropriate:
- a. At 2:00 p.m. or as soon thereafter as can be heard, open the noticed public hearing, note any comments received by the Agency and solicit comments from the public with respect to the Agency's intention to
- b. If comments are received which are sufficient to warrant modifications, the hearing may be continued to a later Board of Directors' meeting to
- the hearing may be continued to a later board of Directors incentify to allow sufficient time for the Agency to respond to comments.

  c. If no comments are received which are sufficient to warrant continuation of the hearing, staff recommends that the Board adoption of the hearing is the sufficient to the sufficient time sufficient to the sufficient time suffici

Resolution No. 07-\_\_ determining to proceed with projects.

Consider \$35 million of 2007 debt for Capital Improvement Projects and adopt Resolution No. 07-\_\_ authorizing the sale of Second Senior Water Revenue Certificates of Participation, Series 2007, and associated debt documents and related actions. Take action as appropriate.

ω

- (NOTE: Prior to adoption, temporarily adjourn as PCWA Board of Directors and convene as the Board of Directors of the PCWA Public Facilities Corporation in special session; see Supplemental Agenda attached.)
- Review activities scheduled for PCWA Fiftieth Anniversary commemoration.
- J. <u>REPORTS BY DIRECTORS</u>: In accordance with Government Code § 54954.2(a), Directors may make brief announcements or brief reports on their own activities. They may ask questions for clarification, make a referral to staff or take action to have staff place a matter of business on a future agenda.

REPORTS BY LEGAL COUNSEL

ᄌ

REPORTS BY GENERAL MANAGER

ŗ

- M. CLOSED SESSION
- REPORT FROM CLOSED SESSION
- ADJOURNMENT

0 Z

## THE NEXT RESOLUTION NUMBER IS 07-25

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Clerk to the Board at (530) 823-4860. Notification by Wednesday noon preceding the meeting will enable the Agency to make reasonable arrangements to ensure accessibility to this meeting. [28 CFR 35.102-35.104 ADA Title II]

In accordance with Government Code Sec. 54954.2(a) this notice and agenda were posted in the Agency's outdoor bulletin board at the Placer County Water Agency Business Center at 144 Ferguson Road, Auburn, California, on August 31, 2007.

## Schedule of Upcoming Board Meetings

- **Thursday, September 13, 2007, 5:30 p.m.** Special Board of Directors meeting at Placer County Water Agency Business Center, 144 Ferguson Road, Auburn, California. 50th Anniversary Celebration
- Thursday, September 20, 2007, 2:00 p.m. Regular Board of Directors meeting at Placer County Water Agency Business Center, 144 Ferguson Road, Auburn, California.

RESOLUTION NO. 07-25\_OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY ADOPTING THE UPDATED WEST PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

WHEREAS, On November 2, 2006 the Board of Directors passed Resolution 06-45 declaring its intent to update its West Placer County Groundwater Management Plan and adopt a statement of public participation; and

WHEREAS, the Agency prepared an updated plan in partnership with the City of Roseville, City of Lincoln, and California-American Water Company in order to promote regionally consistent and

WHEREAS, the updated West Placer County Groundwater Management Plan was prepared in accordance cooperative goals and objectives; and with the California Groundwater Management Act, Assembly Bill 3030, and Senate Bill 1938; and

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Placer County Water Agency hereby adopts the updated West Placer County Groundwater Management Plan

The foregoing resolution was duly passed at meeting of the Board of Directors of the Placer County Water Agency held on September 6, 2007, by the following on roll call:

AYESDIRECTORS: Gray Allen, Alex Ferreira, Mike Lee, Otis Wollan, and Chairman Lowell Jarvis NOES DIRECTORS: None

ABSENT DIRECTORS: None

Signed and approved by me after its passage this 6th day of September, 2007.

Chair, Board of Dir Placer County Water Agenc

Placer County Water/Agency Clerk, Board of Dire

z:/ns.wpgmp.rcsolution.9-6-07

From: legals [mailto:legals@goldcountrymedia.com]
Sent: Wednesday, November 22, 2006 9:07 AM
To: Sharon Crawford
Cc: Greg Young
Subject: Re: City of Lincoln legal notice of public hearing

#### Scheduled as requested

Your order number is: # 16144303 this is the number that I will need if you call me. The order number will change with every ad you place with us.

Good luck. To view your legals on line it has to be done the day it is published only. Do the following:

- goldcountrymedia.com.
   Gold Country Media Front.
   On the left side click on paper name.
   Go to classified, Legals/Public Notices.

Thank for placing your legal ad with Gold Country Media Legal Department.

Legal Advertising Consultant Direct phone number (916) 774-7946 Sent: Tuesday, November 21, 2006 11:46 AM From: Sharon Crawford

To: legals@goldcountrymedia.com Subject: City of Lincoln legal notice of public hearing Cc: Greg Young ---- Original Message --

Wendy,

Please publish the attached legal notice in the 11/30<sup>th</sup> and the 12/7<sup>th</sup> issues of the Lincoln News Messenger. Please confirm receipt of this e-mail. If you have any questions, please call me.

Sharon Crawford
Public Works Department Thank you,

640 Fifth Street Lincoln, CA 95648 (916) 645-8576 (916) 645-6152 (fax)

Office Supervisor

Page 477 of 534

----Original Message---From: gyoung@tullyandyoung.com [mailto:gyoung@tullyandyoung.com]
Sent: Thursday, December 07, 2006 4:16 PM

To: Greg Young

Subject: Email-A-Friend for goldcountryclassifieds.com classifieds

This ad was sent to you by gyoung@tullyandyoung.com from http://www.goldcountryclassifieds.com/.

16144303<br/>
16728A<br/>
1672

This e-mail contains information for the purpose of tracking abuse. If you believe this email is offensive or may be considered spam, please visit the website http://abuse.townnews.com and create an incident report. From this site you can also block messages like this from sending to your email address. Please retain this Mail-ID [bd/7830f0bc/7752322b285db02c16599c], it's needed to view information associated with this message. Click the link below to view the incident. http://abuse.townnews.com/?MailID=bd7830f0bc7752322b285db02c16599c

Read the acceptable use policy: http://systems.townnews.com/public/aup/

### RESOLUTION NO. 2006-259

A RESOLUTION OF THE LINCOLN CITY COUNCIL
OF INTENTION TO (1) CO-DRAFT THE WESTERN PLACER COUNTY
GROUNDWATER MANAGEMENT PLAN WITH THE CITY OF ROSEVILLE,
PLACER COUNTY WATER AGENCY AND PLACER COUNTY, AND
(2) UPDATE THE CITY OF LINCOLN'S 2003 GROUNDWATER
MANAGEMENT PLAN PURSUANT TO THE GROUNDWATER
MANAGEMENT ACT (WATER CODE, §§ 10750 et seq.)

WHEREAS, pursuant to the Groundwater Management Act (Water Code, §§ 10750 et seq.) the City of Lincoln (City) adopted a Groundwater Management Plan (GMP) in November of 2003; and

WHEREAS, the adopted City of Lincoln GMP addressed the monitoring and management associated with the portion of the basin directly underlying the City; and

WHEREAS, the City has been actively implementing management actions included in the adopted GMP; and

WHEREAS, the Groundwater Management Act encourages the periodic review and update of adopted GMPs; and

WHEREAS, the Utility Director desires to update the City's adopted GMP to reflect actions taken over the past two (2) years since its adoption; and

WHEREAS, the City of Roseville and the Placer County Water Agencies also have adopted groundwater management plans in recent years; and

WHEREAS, the City of Lincoln, the City of Roseville, the Placer County Water Agency, and the County of Placer (hereinafter referred to as the Parties) have service areas that include the same groundwater basin; and

WHEREAS, it is the expressed intent of the Legislature to encourage local agencies to work cooperatively to manage groundwater resources within their furisdictions; and

WHERESAS, the Parties recognize the value of cooperating for more effective groundwater management as it relates to the overall quality and reliability of this collective resource in the broader groundwater basin; and

WHEREAS, the City of Lincoln is a local agency authorized to adopt a groundwater management plan, whether an update of the City-only GMP or a regional plan, pursuant to the provisions of the Groundwater Management Act; and

adopt a Resolution of Intent to Draft a Groundwater Management Plan; and Management Plan, a local agency must first hold a public hearing to consider whether to WHEREAS, Water Code §10753.2 requires that, before preparing a Groundwater

regional Groundwater Management Plan; and adopt a resolution of intention to (1) update the City of Lincoln GMP and (2) co-draft a public hearing on December 12, 2006, to receive public comment on whether it should WHEREAS, following the publication of notice required by law, the City held a

the other Parties in the cooperative preparation of a regional Groundwater Management of the City to (1) prepare an update to its currently adopted GMP, and (2) participate with presented at the hearing, the Lincoln city Council determined that it is in the best interest WHEREAS, after considering the public comment and other information

## DOES HEREBY RESOLVE AS FOLLOWS: NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LINCOLN

- County Groundwater Management Plan with the City of Roseville, the Placer County Water Agency and the County of Placer. The Lincoln City Council deems it advisable and in the best interest of the November 2003, and (2) cooperate in the preparation of the Western Placer City to (1) prepare an update to the City of Lincoln GMP, adopted in
- Water Code §10750 et seq. draft the Western Placer County Groundwater Management Plan, pursuant to The City hereby declares its intention to (1) update the 2003 GMP, and (2) co
- necessary and appropriate to implement this resolution. The Director of Public Works is directed to take any additional action

ω.

2

vote: PASSED and ADOPTED this 12th day of December, 2006, by the following roll call

NOES: AYES: COUNCILMEMBERS: COUNCILMEMBERS: Stackpoole, Cosgrove, Short, Santini, Nakata

ATTEST:

ABSENT:

Patricia Avila

CITY CLERK

January 25, 2007

Publish: February 1, 2007 and February 8, 2007

Customer No. 17Cl160

- Message from "Greg Young" <gyoung@tullyandyoung.com> on Thu, 4 Oct 2007 12:25:36

0800 ----To: "Greg Young" <gyoung@tullyandyoung.com>, "Greg Young" <gyoung@tullyandyoung.co Subject: Greg Young wanted you to see this (from GoldCountryClassifieds.com)

From: Greg Young,

16201689

NOTICE OF PUBLIC HEARING

Plan (WPCGMP), pursuant to the Groundwater Management Act Lincoln will conduct a public hearing on Tuesday, October 23, 2007 at the hour of 6:30 p.m. or thereafter at the McBean Park Pavilion, 65 NOTICE IS HEREBY GIVEN that the City Council of the City of adoption of the Western Placer County Groundwater Management McBean Park Drive, regarding the City's intent to review and consider (California Water Code §10750 et seq.). Interested persons are invited to attend.

www.wpcgmp.org or may be obtained for the cost of reproduction in the City's Public Works Department, at 640 Fifth Street, Lincoln, CA A copy of the proposed WPCGMP can be accessed online at

Works at (916) 645-8576. If you have questions, please contact John Pedri, Director of Public

Patricia Avila

City C lerk

Date: October 1, 2007

Published in Lincoln News Messenger: October 4, 11, 2007

All rights reserved. Classified Ad contents of this email are all Copyright 2007 Gold Country Media.

---- Message from "Sharon Crawford" <scrawfor@ci.lincoln.ca.us> on Mon, 6 Nov 2006 08:14:12 To: "Greg Young" <gyoung@tullyandyoung.com>

Subject: FW: Staff Report and Resolution for GMP

Gwen found the reso & staff report as attached.

Sharon

From: Gwendolyn Scanlon
Sent: Monday, November 06, 2006 8:10 AM
To: Sharon Crawford
Subject: Staff Report and Resolution for GMP

Thanks,

Gwen

Gwendolyn Scanlon Office Assistant II Department of Public Works City of Lincoln 640 Fifth Street Lincoln, CA 95648 916-645-6152 fax

W





### CITY COUNCIL/REDEVELOPMENT AGENCY MEETING AGENDA

# A CLOSED SESSION WILL BE HELD AT 5:30 PM, NOVEMBER 27, 2007, IN THE MAIN CONFERENCE ROOM OF CITY HALL, 640 FIFTH STREET TO DISCUSS:

Conference with Real Property Negotiator-City Manager- Pursuant to Government Code Section 54956.8 – APN #019-290-003 – Sundance - Lakeview Properties, LLC et al

PLEASE NOTE: THE CITY COUNCIL MEETING WILL BE HELD AT THE MCBEAN PARK PAVILION, LOCATED AT 65 MCBEAN PARK DRIVE, LINCOLN, CALIFORNIA 95648. November 27, 2007 6:30 PM

#### **ROLL CALL**

## PLEDGE OF ALLEGIANCE

N

INVOCATION - Bill Rontani, St. James Episcopal Church

## PRESENTATIONS - none

ω

#### CONSENT AGENDA

4

#### NOTICE TO THE PUBLIC

All matters listed under the Consent Agenda are considered to be routine and all will be enacted by one motion. There will be no separate discussion of these items unless a member of the City Council or a citizen requests a specific item to be removed from the Consent Agenda for separate action. Any items removed will be considered after the

## CITY MANAGER'S DEPARTMENT

C B > 5

P 5.2

# Adopt Resolution 2007-196 approving warrants of October 29 and November 5, 2007. Approve minutes of the November 13, 2007 Council meeting. Adopt Resolution 2007-197 in support of issuing a Tom Bradley commemorative stamp.

Ordinance 827B adding Section 16.48.060 to the Lincoln Municipal Code Pertaining to

COMMUNITY DEVELOPMENT DEPARTMENT

#### P. 5.3 Approve Administrative Policy No. 99 regarding Library Meeting Room Policy. Temporary Political signs. (second reading). LIBRARY

## CITIZENS ADDRESSING THE COUNCIL

9

## Policy for Citizens Addressing the Council:

As in the past, we will listen respectfully to what any citizen addressing Council may have to say regarding an item NOT scheduled for a public hearing or another matter of concern affecting the City of Lincoln. However, those addressing the Council will be limited to five to the podium will be disregarded or ruled out of order. ALL comments/questions should be addressed to the Mayor. In most cases questions will be either answered during the meeting, in writing, or in some cases, the issue will be set for a future agenda. minutes, unless extended by the Mayor. Comments from the audience WITHOUT coming

#### **PUBLIC HEARINGS**

#### 7.1 7. COMMUNITY DEVELOPMENT DEPARTMENT

# Ordinance 828B Amending Chapter 15 of the Lincoln Municipal Code Pertaining to the Adoption of International and Uniform Building Codes

Council needs to allow for a staff report regarding the proposed Ordinance amending Chapter 15 of the Lincoln Municipal Code.

#### Action Required:

- -Open the required public hearing to receive testimony.

   Waive reading and introduce **Ordinance 828B** amending Chapter 15 of the Lincoln Municipal Code pertaining to the adoption of International and Uniform Building Codes.

#### STAFF REPORTS

00

#### 8.1 CITY MANAGER'S DEPARTMENT

## Relocation Plan and Move for the Lincoln Archives Building

P

subsequent move of the Lincoln Archives Council needs to allow for a brief staff report regarding the relocation plan and

#### Action Required:

assistance of the Public Works Department to accomplish this move -Approve the relocation plan of the Lincoln Archives to the Civic Center with the offer of

## PUBLIC WORKS DEPARTMENT

## Western Placer County Groundwater Management Plan

P 8.2

Council needs to allow for a brief staff report regarding the Western Placer County Groundwater Management Plan (WPCGMP).

#### Action Required:

Groundwater Management Plan and (2) Approving the Memorandum of Agreement for Motion to adopt Resolution 2007-198 (1) Adopting the Western Placer County

Implementation of the Western Placer County Groundwater Management Plan (WPCGMP) and authorizing the City Manager and City Clerk to execute the WPCGMP.

Quiet Zone Evaluation of Public Streets at Grade Crossings of the Union Pacific Railroad Tracks Within the City of Lincoln

Council needs to allow for a staff report and PowerPoint presentation regarding the Quiet Zone Evaluation draft report prepared by Railroad Controls Limited.

Ö

Action Required:
-Provide staff with further direction.

COUNCIL INITIATED BUSINESS

9.

COUNCIL COMMITTEE REPORTS

ADJOURNMENT

11.

## RESOLUTION NO. 2007- 198

#### (1) ADOPT THE WESTERN PLACER COUNTY GROUNDWATER IMPLEMENTATION OF THE WESTERN PLACER COUNTY (2) APPROVE THE MEMORANDUM OF AGREEMENT FOR A RESOLUTION OF THE LINCOLN CITY COUNCIL TO GROUNDWATER MANAGEMENT PLAN MANAGEMENT PLAN, AND

(GMP) in November of 2003; and 10750 et seq.) the City of Lincoln (City) adopted a Groundwater Management Plan WHEREAS, pursuant to the Groundwater Management Act (Water Code, §§

WHEREAS, the adopted City of Lincoln GMP addressed the monitoring and management associated with the portion of the basin directly underlying the City; and

WHEREAS, the City has been actively implementing management actions included in the adopted GMP; and

and update of adopted GMPs; and WHEREAS, the Groundwater Management Act encourages the periodic review

WHEREAS, the City of Lincoln, City of Roseville, Placer County Water Agency and California-American Water Company have jointly prepared the Western Placer County Groundwater Management Plan (WPCGMP) to join together in a regional plan;

WHEREAS, the City of Lincoln, following required public noticing, held a Public Hearing on the WPCGMP on October 23, 2007; and

WHEREAS, the City of Lincoln is a local agency authorized to adopt a groundwater management plan, and

WHEREAS, the City of Lincoln, City of Roseville, Placer County Water Agency and California-American Water Company have also drafted a Memorandum of Agreement for Implementation of the WPCGMP (Implementation MOA), and

coordinate their efforts in implementing the WPCGMP; (2) to memorialize the Parties'

WHEREAS, the Implementation MOA addresses how the Parties intend: (1) to

express understanding relating to such efforts; and (3) to allocate costs to be expended in

administering the WPCGMP's implementation, and

WHEREAS, after considering the public comment and other information presented at the hearing, the Lincoln City Council determined that it is in the best interest of the City to (1) adopt the WPCGMP, and (2) approve the Implementation MOA.

## DOES HEREBY RESOLVE AS FOLLOWS: NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LINCOLN

- The Lincoln City Council deems it advisable and in the best interest of the City to (1) adopt the Western Placer County Groundwater Management Plan, and (2) approve the Memorandum of Agreement for the Implementation of the Western Placer County Groundwater Management Plan.
- The City hereby agrees to (1) adopt the Western Placer County Groundwater Management Plan, and (2) approve the Memorandum of Agreement for the Implementation of the Western Placer County Groundwater Management

2

necessary and appropriate to implement this resolution. The Director of Public Works is directed to take any additional action

PASSED and ADOPTED this 27th day of November, 2007, by the following roll call

AYES: COUNCILMEMBERS: None

COUNCILMEMBERS: Stackpoole, Cosgrove, Short, Santini, Nakata

vote:

ABSENT: COUNCILMEMBERS: None NOES:

Kent Nakata, Mayor

ATTEST:

APPROVED AS TO FORM:

Patricia Avila, City Clerk

City Attorney



### APPENDIX B

## WPCGMP Public Outreach Plan

# WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

## TASK 2.4: STAKEHOLDER INVOLVEMENT

enhance underground supplies in Western Placer County, the program will provide for greater water supply Developed in stages since early 2005, the Western Placer County Groundwater Management Plan (GMP) is a collaborative effort by local water purveyors to monitor urban pumping of groundwater reserves during California American Water (CalAm). Although Placer County is not yet a formal participant in the GMP various intervals in the planning process, with the City of Roseville serving as the original proponent. Other reliability during drought periods. The GMP's staged approach stems from the inclusion of new partners at normal and wet years. Moreover, by employing groundwater management practices that maintain and staff has been active participants. partners, in order of their formal inclusion, are Placer County Water Agency (PCWA), City of Lincoln, and

requirements: basin goals, basin management objectives (BMOs), plan components, and management actions. All major GMP elements have been developed and reviewed by staff at each partner agency. These elements are now ready for presentation to elected officials, key stakeholders and other interested parties for When completed, the GMP will feature four key elements, the content of these satisfy Senate Bill 1938 their input and feedback

#### Goals and Objectives

Provide a public involvement mechanism for elected officials, water purveyors, farmers, ranchers, environmentalists and other interested parties to comment, validate and rank current and future GMP measures and action items. Through various public outreach methods, plan proponents will seek to gather support and acceptance of the proposed GMP.

#### Discussion

MWH will facilitate presentations/workshops to the boards/councils of each partner agency and conduct a public meeting for key stakeholders and other interested parties. Meetings will be supported by public notices, creation of a stakeholder database, a public website and a GMP Workbook.

## 2.4.1: BOARD/COUNCIL PRESENTATIONS:

City of Lincoln, CalAm, and Placer County. MWH will further coordinate presentations to the City of Roseville Public Utilities Commission and the Water Caucus of The Water Forum. MWH will also attend answer session. The presentation schedule, in order, will be City of Roseville, Placer County Water Agency, Presentations will feature a 15-minute PowerPoint presentation, followed by a 30 minute question-and-MWH will facilitate one presentation to the boards/councils of each partner agency (total of five) provided at each meeting for members of the public wishing to be added to the stakeholder database. various one-on-one briefings with locally elected officials as necessary. Stakeholder interest cards will be

#### Supporting elements:

- Agenda Packet: GMP and Joint Powers Agreement (JPA) administrative drafts, and GMP Fact Sheet
- Print and electronic copies of the GMP PowerPoint presentation
- Stakeholder interest cards

May 2007

## 2.4.2: STAKEHOLDER INVOLVEMENT:

MWH will facilitate a partner-led public meeting at a location geographically convenient for interested parties and key stakeholders, such as Nevada Irrigation District, South Sutter Water District, Natomas Central Mutual Water Company, Rio Linda/Elverta Community Water District, and Yuba County Water their expectations. Overarching components of the GMP will be posted on a stand-alone website for stakeholder feedback, and provide attendees the opportunity to rank how various actions and measures meet stakeholders to review prior to the workshop. Agency. Beverages and light snacks will be served. The three-hour workshop will present the GMP, gather

#### Supporting elements:

- GMP Workbook
- **GMP** Website
- Public Notices
- Stakeholder Database

#### Workshop Invitees:

- All Neighboring Water Purveyors
- Environmental Caucus of The Water Forum
- Placer County Farm Bureau
- Placer County Agriculture Commissioner
- Placer County Planning Commission
- Developers, major landowners
- Environmental groups
- Basin Water shed group (Linda Creek, Coon Creek, Secret Ravine, Auburn Ravine, Dry Creek) The Nature Conservancy, Sierra Club, Foothill Water Network, Dry Creek Conservancy/American

## 2.4.3: SUPPORTING ELEMENTS:

- GMP Workbook MWH will develop a 16-page workbook for distribution at the compiled and utilized for completion of the GMP. Participants will be provided opportunities to rate elements on a sliding scale and provide written revisions. The document may be collected at the meeting or returned by U.S. Mail. Survey results will be chapters - Goals, Basin Management Objectives, Plan Components and Management Actions. actions and measures; and as a stakeholder survey. The GMP Workbook will be divided into four 5.5x8.5 booklet. The document will serve two key functions: a vehicle to inform stakeholders of plan The black and white workbook will be printed two-sides on 8.5x11 inch paper, folded once to form a **GMP** Workshop
- URL is www.wpcgmp.org. Written to a layperson, the site will include: Workshop and serve as a vehicle to distribute draft documents for public comment. The recommended GMP Website - MWH will develop a five-page project website. This site will support the Stakeholder
- Home To contain names of each partner agency, synopsis of the program
- Background Historical account of the groundwater basin and the chronology of project proponent participation.
- About Brief review of project purpose and key elements as required by state regulation
- Documents A repository for posting the GMP Fact Sheets, GMP Workbook, PowerPoint presentations, and other materials.
- Contact Us To include project proponents and the consultant team.
- Public Notices MWH will prepare public notices for publication in local newspapers by project proponents, as necessary, in support of the Stakeholder Workshop

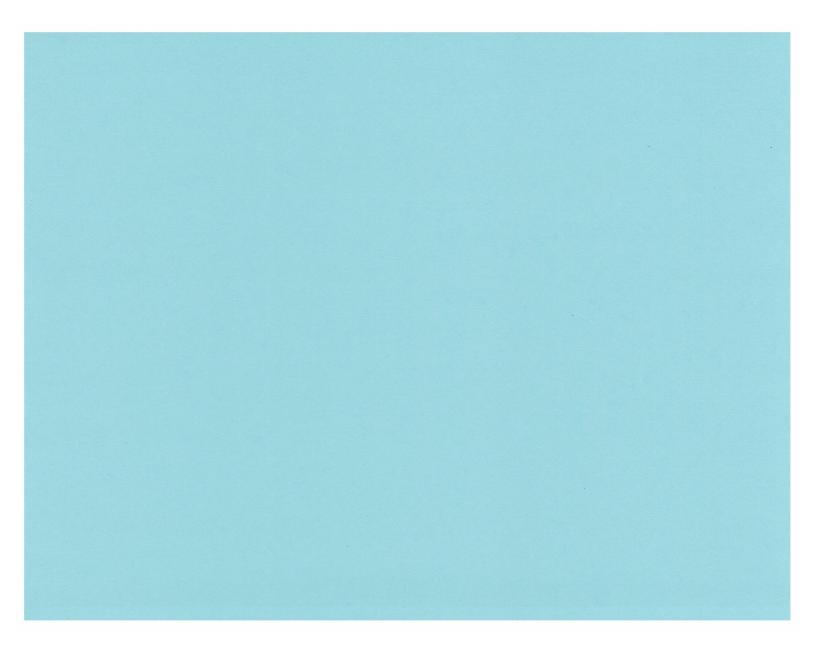
Final Administrative Draft

May 2007

Western Placer County Groundwater Management Plan

Final Administrative Draft

**Chapter Title** 



### APPENDIX C

**Standard Operation Procedures for Groundwater Elevation Monitoring** 

## STANDARD OPERATING PROCEDURE

For

MANUAL WATER LEVEL MEASUREMENTS

÷.

May 2007

## TABLE OF CONTENTS

TABLE OF CO	TABLE OF CONTENTSi
SECTION 1.0	SCOPE AND APPLICATION1
SECTION 2.0	METHOD SUMMARY1
SECTION 3.0	POTENTIAL PROBLEMS2
SECTION 4.0	EQUIPMENT2
SECTION 5.0	PROCEDURES       2         5.1 Preparation       2         5.2 Procedures       3
SECTION 6.0	CALCULATIONS3
SECTION 7.0	QUALITY ASSURANCE/QUALITY CONTROL4
SECTION 8.0	HEALTH AND SAFETY5
SECTION 9.0	REFERENCES5

## SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to set guidelines for the determination of the depth to water and separate phase chemical product (i.e., gasoline or oil) in a water supply well, monitoring well, or piezometer. These standard operating procedures may be varied or changed as required, dependent on site conditions, and equipment limitations. In all instances, the actual procedures employed will be documented and described on the field form. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

Page 498 of 534

Generally, water-level measurements taken in piezometers, or wells are used to construct water table or potentiometric surface maps and to determine flow direction as well as other aquifer characteristics. Therefore, all water level measurements in a given district should preferably be collected within a 24-hour period and the WPCGMP area within one week. However, certain situations may produce rapidly changing groundwater levels that necessitate taking measurements as close in time as possible. Large changes in water levels among wells may be indicative of such a condition. Rapid groundwater level changes may occur due to:

- Atmospheric pressure changes
- Changes in river stage, impoundments levels, or flow in unlined ditches
- Pumping of nearby wells
- ттестрианоп
- Tidal influences

## 0 METHOD SUMMARY

A survey mark should be placed on the top of the riser pipe or casing as a reference point for groundwater level measurements. If the lip of the riser pipe is not flat, the reference point may be located on the grout apron or the top of the outer protective casing (if present). The measurement reference point should be documented on the groundwater level data form. All field personnel must be made aware of the measurement reference point being used in order to ensure the collection of comparable data. Before measurements are made, water levels in piezometers and monitor wells should be allowed to stabilize for a minimum of 24 hours after well construction and development. Measurements in water supply wells need to be noted as questionable if pumping has or is occurring. In low yield situations, recovery of water levels to equilibrium may take longer. All measurements should be made as accurately as possible, with a minimum accuracy of 0.1 feet. Future measurements may have to be more accurate (measurements to the nearest 0.01 foot may be needed for conjunctive use projects, etc.). Ideally, the minimum measurement accuracy is 0.1 feet and the recommended accuracy is 0.01 feet.

If there is reason to suspect groundwater contamination, water level measuring equipment must be decontaminated and, in general, measurements should proceed from the least to the most contaminated wells. This SOP assumes an absence of contamination and no need for air monitoring or decontamination.

Open the well and monitor the headspace with the appropriate air-monitoring instrument if the presence of volatile organic compounds is suspected. For electrical sounders lower the device into the well until the water surface is reached as indicated by a tone or meter deflection. Record the distance from the water surface to the reference point. Measurement with a chalked tape will

WH 1 of 5 May 2007

Western Placer County Groundwater Management Plan Standard Operating Procedure for Manual Water Level Measurements - Appendix C

measurement of product thickness and water level. necessary. Note that if a separate phase is present, an oil/water indicator probe is required for readings. Remove measuring device, replace riser pipe cap, and decontaminate equipment as depth mark held at the reference point The depth to water is the difference between the two reference point. Record both the water level as indicated on the chalked tape section and the necessitate lowering the tape below the water level and holding a convenient foot marker at the

Page 499 of 534

## POTENTIAL PROBLEMS

- Cascading water, particularly in open-hole or rock wells, may interfere with the measurement.
- Some older types of electric sounders are only marked at five-foot intervals. A surveyor's tape is necessary to extrapolate between the 5-foot marks.
- S. Oil or other product floating on the water column can insulate the contacts of the probe containing floating product, a special oil/water level indicator is required, and the on an electric sounder and give false readings. For accurate level measurements in wells corrected water level must be calculated.
- Tapes (electrical or surveyor's) may have damaged or missing sections, or may be spliced inaccurately.
- 5 An airline may be the only available means to make measurements in sealed production wells but the method is generally accurate only to approximately 0.2 foot.
- 6. When using a steel tape, it is necessary to lower the tape below the water level in order to make a measurement. This assumes knowledge of the approximate groundwater level.

#### EQUIPMENT

measure water levels. Both have an accuracy of 0.01 feet. Other field equipment may include: The electric water level indicator and the chalked steel tape are the devices commonly used to

- Air monitoring instrumentation
- Well depth measurement device (sounder)
- Chalk
- Ruler
- Site logbook
- Paper towels and trash bags
- Decontamination supplies (assumed unnecessary)
- Groundwater level data forms

#### 5.0 **PROCEDURES**

#### 5.1 Preparation

- Determine the number of measurements needed, the methods to be employed, and the equipment and supplies needed.
- Decontaminate or pre-clean equipment, and ensure that it is in working order.
- Coordinate schedule with staff and regulatory agency, if appropriate

HMM 2 of 5

May 2007

- If this is an initial visit, perform a general site survey prior to site entry in accordance with a current approved site specific Health and Safety Plan (id applicable).
- Identify measurement locations

#### 5.2 Procedures

Procedures for determining water levels are as follows:

- If possible, and when applicable, start at those wells that are least contaminated and proceed to those wells that are most contaminated.
- Rinse all the equipment entering the well.
- Remove locking well cap, note well ID, time of day, and date on the groundwater level data form.
- . Remove well cap.

5.

- If required by site-specific condition, monitor headspace of well with a photoionization detector (PID) or flame ionization detector (FID) to determine presence of volatile organic compounds, and record results in logbook.
- 6. Lower water-level measuring device into the well. Electrical tapes are lowered to the water surface whereas chalked steel tapes are lowered generally a foot or more below the water surface. Steel tapes are generally chalked so that a 1-to 5-foot long section will fall below the expected water level.
- For electrical tapes record the distance from the water surface, as determined by the audio signal or meter, to the reference measuring point and record. For chalked tapes, an even foot mark is held at the reference point, once the chalked section of the tape is below the water level. Both the water level on the tape and the foot mark held at the reference point is recorded. The depth to the water is then the difference between the two readings. In addition, note the reference point used (top of the outer casing, top of the riser pipe, ground surface, or some other reproducible position on the well head). Repeat the measurement.
- Remove all downhole equipment, replace well cap and locking steel caps
- Rinse all downhole equipment and store for transport to the next well.
- 10. Note any physical changes, such as erosion or cracks in protective concrete pad or
- 11. Note any physical changes, such as erosion or cracks in protective concrete pad or variation in total depth of well on groundwater level data form.

## 6.0 CALCULATIONS

To determine groundwater elevation above mean sea level, use the following equation:

$$E_w = E - D$$

where:

 $E_W$ 

Elevation of water above mean sea level (feet) or local datum

= Elevation above sea level or local datum at point of measurement (feet)

Depth to water (feet)

3 of 5

May 2007

MWH

## 7.0 QUALITY ASSURANCE/QUALITY CONTROL

The following general quality assurance/quality control (QA/QC) procedures apply:

All data must be documented on the groundwater level data forms.

Page 501 of 534

- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified.
- Each well should be tested at least twice in order to compare results. If results do not because of one or more conditions as indicated in Section 1, and should be noted on the agree to within 0.02 feet, a third measurement should be taken and the readings averaged Consistent failure of consecutive readings to agree suggests that levels are changing
- Results should be compared to historical measurements while in the field and significant discrepancies noted and resolved if possible.
- S Wells for which no or questionable measurements are obtained need to have the codes entered on the field form as follows:

	No Measurement	Que	Questionable Measurement
0	Discontinued	0	Caved or deepened
_	Pumping	1	Pumping
2	Pumphouse locked	2	Nearby pump operating
w	Tape hung up	ယ	Casing leaking or wet
4	Can't get tape in casing	4	Pumped recently
υı	Unable to locate well	υ	Air or pressure gauge
			measurement
6	Well destroyed	6	Other
7	Special	7	Recharge operation at nearby well
<b>∞</b>	Casing leaking or wet	8	Oil in casing
9	Temporarily inaccessible		
D.	Dry well		
Ŧ.	Flowing well		

The surveyor(s) must complete all fields on the field form and initial. Upon return from the field, appropriate corrective actions need to be communicated and completed prior to the next survey event.

6.

- All data entered into electronic spreadsheet or database should be double-keyed or hard copy printed and proofed by a second person.
- Questionable wells or measurements noted during data compilation need to result in corrective actions if applicable.

00

#### . 0 **HEALTH AND SAFETY**

MWH 4 of 5

May 2007

Western Placer County Groundwater Management Plan Standard Operating Procedure for Manual Water Level Measurements - Appendix C
This SOP assumes that only uncontaminated wells are being measured. If not, a current approved site Health and Safety Plan should be consulted..

#### 9.0 REFERENCES

Driscoll, F.G. 1986. Groundwater and Wells. Second Edition. Chapter 16. Collection and Analysis of Pumping Test Data. pp 534-579. Johnson Filtration Systems Inc. St. Paul, Minnesota.

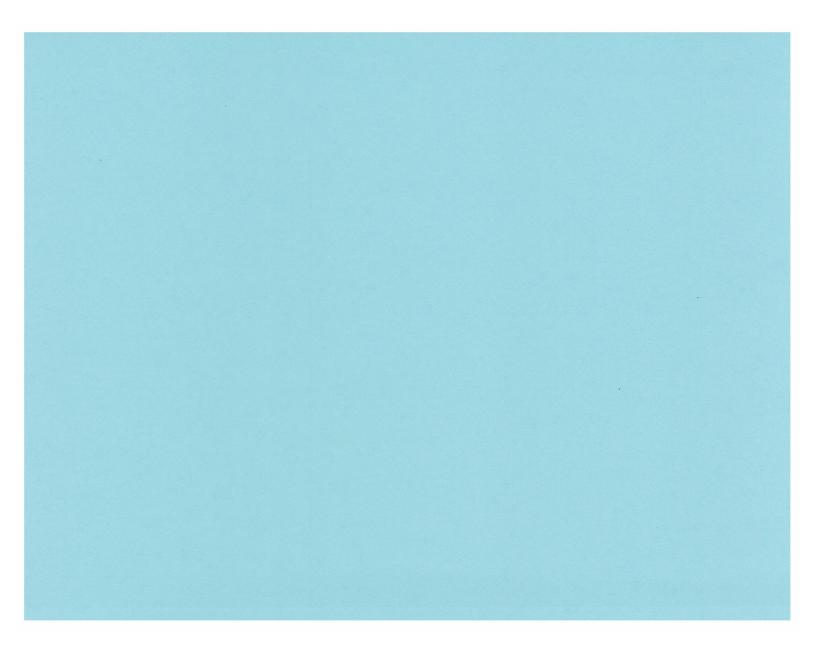
U.S. Environmental Protection Agency (USEPA), 1986. RCRA Groundwater Monitoring Technical Enforcement Guidance Document, pp. 207.

USEPA, 1987, A Compendium of Superfund Field Operations Methods. EPA/540/p-87/001 Office of Emergency and Remedial Response Washington, D.C. 20460.

USEPA, 2000. Environmental Response Team SOP 2043, 10 pages Feb. 11 2000.

MWH 5 of 5

May 2007



### APPENDIX D

# **AGENCIES - RESOLUTIONS OF ADOPTION**

## RESOLUTION NO. 2007- 198

# A RESOLUTION OF THE LINCOLN CITY COUNCIL TO (1) ADOPT THE WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN, AND

## (2) APPROVE THE MEMORANDUM OF AGREEMENT FOR IMPLEMENTATION OF THE WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

WHEREAS, pursuant to the Groundwater Management Act (Water Code, §§ 10750 et seq.) the City of Lincoln (City) adopted a Groundwater Management Plan (GMP) in November of 2003; and

WHEREAS, the adopted City of Lincoln GMP addressed the monitoring and management associated with the portion of the basin directly underlying the City, and

WHEREAS, the City has been actively implementing management actions included in the adopted GMP; and

WHEREAS, the Groundwater Management Act encourages the periodic review and update of adopted GMPs; and

WHEREAS, the City of Lincoln, City of Roseville, Placer County Water Agency and California-American Water Company have jointly prepared the Western Placer County Groundwater Management Plan (WPCGMP) to join together in a regional plan; and

WHEREAS, the City of Lincoln, following required public noticing, held a Public Hearing on the WPCGMP on October 23, 2007; and

WHEREAS, the City of Lincoln is a local agency authorized to adopt a groundwater management plan, and

WHEREAS, the City of Lincoln, City of Roseville, Placer County Water Agency and California-American Water Company have also drafted a Memorandum of Agreement for Implementation of the WPCGMP (Implementation MOA), and

WHEREAS, the Implementation MOA addresses how the Parties intend: (1) to coordinate their efforts in implementing the WPCGMP; (2) to memorialize the Parties' express understanding relating to such efforts; and (3) to allocate costs to be expended in administering the WPCGMP's implementation, and

WHEREAS, after considering the public comment and other information presented at the hearing, the Lincoln City Council determined that it is in the best interest of the City to (1) adopt the WPCGMP, and (2) approve the Implementation MOA.

# NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LINCOLN DOES HEREBY RESOLVE AS FOLLOWS:

- The Lincoln City Council deems it advisable and in the best interest of the City to (1) adopt the Western Placer County Groundwater Management Plan, and (2) approve the Memorandum of Agreement for the Implementation of the Western Placer County Groundwater Management Plan.
- 2. The City hereby agrees to (1) adopt the Western Placer County Groundwater Management Plan, and (2) approve the Memorandum of Agreement for the Implementation of the Western Placer County Groundwater Management
- The Director of Public Works is directed to take any additional action necessary and appropriate to implement this resolution.

ů.

vote: PASSED and ADOPTED this 27th day of November, 2007, by the following roll call

COUNCILMEMBERS: Stackpoole, Cosgrove, Short, Santini, Nakata

AYES:

NOES: ABSENT: COUNCILMEMBERS: None COUNCILMEMBERS: None

Kent Nakata, Mayor

ATTEST:

APPROVED AS TO FORM:

Patricia Avila, City Clerk

City Attorney

9/7/07 pc, Tong

RESOLUTION NO. 07- 25\_ OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY ADOPTING THE UPDATED WEST PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

WHEREAS, On November 2, 2006 the Board of Directors passed Resolution 06-45 declaring its intent to update its West Placer County Groundwater Management Plan and adopt a statement of public

participation; and

WHEREAS, the Agency prepared an updated plan in partnership with the City of Roseville, City of Lincoln, and California-American Water Company in order to promote regionally consistent and

WHEREAS, the updated West Placer County Groundwater Management Plan was prepared in accordance with the California Groundwater Management Act, Assembly Bill 3030, and Senate Bill 1938; and cooperative goals and objectives; and

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Placer County Water Agency hereby adopts the updated West Placer County Groundwater Management Plan.

The foregoing resolution was duly passed at meeting of the Board of Directors of the Placer County Water

Agency held on September 6, 2007, by the following on roll call:

AYESDIRECTORS: Gray Allen, Alex Ferréira, Mike Lee, Otis Wollan, and Chairman Lowell Jarvis NOES DIRECTORS: None

ABSENT DIRECTORS: None

Signed and approved by me after its passage this  $6^{\rm th}$  day of September, 2007.

Chair, Board of Directo Placer County Water A

Placer County Water/Agency Clerk, Board of Dire

z:/ns.wpgmp.resolution.9-6-07

### RESOLUTION NO. 07-426



# ADOPTING THE WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN

WHEREAS, on August 3, 2005, the City Council authorized staff to prepare a groundwater management plan; and

groundwater management goals and objectives, staff proposed development of a joint plan with Placer County Water Agency; and WHEREAS, in order to promote regionally consistent and cooperative

WHEREAS, the Ground Water Management Plan was prepared in accordance with the California Groundwater Management Act, AB3030 and SB 1938; and

County Groundwater Management Plan; WHEREAS, the City Council has reviewed the proposed Western Placer

Roseville hereby adopts the Western Placer County Groundwater Management Plan, pursuant to California Water Code Section 10753. NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of PASSED AND ADOPTED by the Council of the City of Roseville this 1st day

August \_, 2007, by the following vote on roll call:

NOES COUNCILMEMBERS: Allard, Roccucci, Garcia, Garbolino, Gray

AYES

COUNCILMEMBERS: None

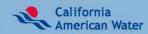
ABSENT COUNCILMEMBERS: None

Page 508 of 534









### WESTERN PLACER COUNTY GROUNDWATER **MANAGEMENT PLAN**



TH	IS PAGE 1	NTENTI	ONALLY	I FET RIAL	NK .
			OTTELL		122

Appendix D-4	Martis Valley Ground	lwater Management	Plan
Placer County Water A	Agency		



### MARTIS VALLEY GROUNDWATER MANAGEMENT PLAN

by

### PLACER COUNTY WATER AGENCY

Adopted October 6,1998

### **TABLE OF CONTENTS**

SECTION	PAGE
EXECUTIVE SUMMARY	2
A. INTRODUCTIONAB3030	
Placer County Water Agency	
Groundwater Management Plan Area	
Truckee River Operating Agreement	
Governance as Related to Water Use in Martis Valley	
PCWA Preliminary Study	
B. GMP COMPONENTS  B.1 MONITOR GROUNDWATER LEVELS AND QUALITY, AND  EVALUATE SAFE YIELD	
Land Use Trends	
Surface Water Availability	
Groundwater Needs and Availability	
Measurement of Water	
Evaluate Groundwater Safe Yield	. 14
Monitor Groundwater Levels and Quality	. 15
B.2 COORDINATION WITH OTHERS IN THE MARTIS VALLEY	15
C. EXCLUDED PLAN COMPONENTS	. 16
D. PLAN UPDATING	17
E. IMPLEMENTATION	17
F. RECOMMENDATIONS	. 18
G. REFERENCES	19
H APPENDICES	20

### **EXECUTIVE SUMMARY**

On November 7, 1996 the Water Agency Board of Directors adopted a Resolution of Intention to draft an AB3030 type groundwater management plan for the Martis Valley area. This document presents the proposed Groundwater Management Plan for Martis Valley. The goal of the Plan is to manage the groundwater resource for the benefit of the current population and for the future economic development needs in Placer County and to work collaboratively with the jurisdictions in Nevada County which share the use of this aquifer.

The Plan consists of the following components:

- monitoring of groundwater levels and groundwater quality,
- evaluating the need to refine the existing determination of the interim safe yield of the basin,
- maximizing groundwater management coordination within the Placer and Nevada County portions of Martis Valley

The Water Agency will continue to represent its interests and the water resource interests of Placer County in the Truckee River Operating Agreement negotiations and future implementation. The Water Agency does not intend to utilize the powers granted by AB3030 regarding the levying of a fee or assessment based upon groundwater pumping. If such a need is clearly demonstrated in the future, the Water Agency will involve all the appropriate stakeholders on the issues and solution options and conduct a public hearing in accordance with State law prior to any consideration for action. The Plan will not affect wells serving individual residences. It is not the intent of the Agency to become the regulator of groundwater extraction nor is it implied that there is a near term need to regulate groundwater extractions in the Plan area.

### A. INTRODUCTION

### **AB3030**

AB3030 was approved by the California Legislature in 1992 and is now codified in the California Water Code Sections 10750, et seq. This law allows local agencies whose service areas overlie a State designated groundwater basin to develop and implement groundwater management plans (GMP or Plan). For the purposes of groundwater management plans, the Water Code defines a "local agency" as any local public agency that provides water service to all or a portion of its service area and includes a joint powers authority formed by local public agencies that provide water service. A local agency may not manage groundwater pursuant to AB3030 within a service area of another local agency, water corporation, or mutual water company, without the agreement of that entity.

The purpose of the GMP is to outline the role of the local agency in managing the local groundwater resources so as to maximize the water supply and to protect the quality of the supply. To facilitate the development of groundwater management, Water Code Section 10753.7 **Plan Components** cites the following:

- " A groundwater management plan may include components relating to all of the following:
  - a) The control of saline water intrusion.
  - b) Identification and management of wellhead protection areas and recharge areas.
  - c) Regulation of the migration of contaminated groundwater.
  - d) The administration of a well abandonment and well destruction program.
  - e) Mitigation of conditions of overdraft.
  - f) Replenishment of groundwater extracted by water producers.
  - g) Monitoring of groundwater levels and storage.
  - h) Facilitating conjunctive use operations.
  - i) Identification of well construction policies.
  - j) The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling and extraction projects.
  - k) The development of relationships with state and federal regulatory agencies.

The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination."

Water Code Section 107554.2 states that a local agency that adopts a groundwater management plan may impose annual fees and assessments based upon the amount of groundwater pumped to pay for costs incurred by the local agency. These costs must be associated with the acquisition of replenishment water, administrative and operating costs, and with capital projects necessary to implement the GMP. Water Code Section 10754.3 further states that the local agency must hold an election on the proposition of whether the local agency shall be authorized to levy a groundwater management assessment or fix and collect fees for the replenishment or extraction of groundwater. The Water Agency would be required to present the proposition in a County general or special election. The election must be conducted only in that portion of the local agency's jurisdiction subject to the proposition. The local agency is so authorized if a majority of the votes cast at the election is in favor of the proposition.

There are several steps required by AB3030 before a GMP can actually be implemented, the first two of which the Water Agency accomplished in November 7, 1996:

- Conduct a noticed public hearing to adopt a Resolution of Intention to prepare a Draft GMP
- 2. Write and publish the Resolution of Intention to prepare a Draft GMP
- 3. Draft a GMP within two years of the date of the adoption of the Resolution of Intention. If the GMP is not drafted and adopted for implementation within two years, the entire process must be restarted
- 4. Conduct a second noticed public hearing to determine whether to adopt the plan
- 5. Within 35 days after the conclusion of the second hearing, the Board may adopt the proposed plan unless protests have been filed by the owners of more than 50% of the assessed valuation of the land subject to the plan

### Placer County Water Agency

The Placer County Water Agency was created in 1957 by a special Act of the State Legislature, entitled "Placer County Water Agency Act." This Act gives the Water Agency very special County-wide authority, with broad Agency-wide powers associated with water. The boundary of the Water Agency encompasses over 1,500 square miles

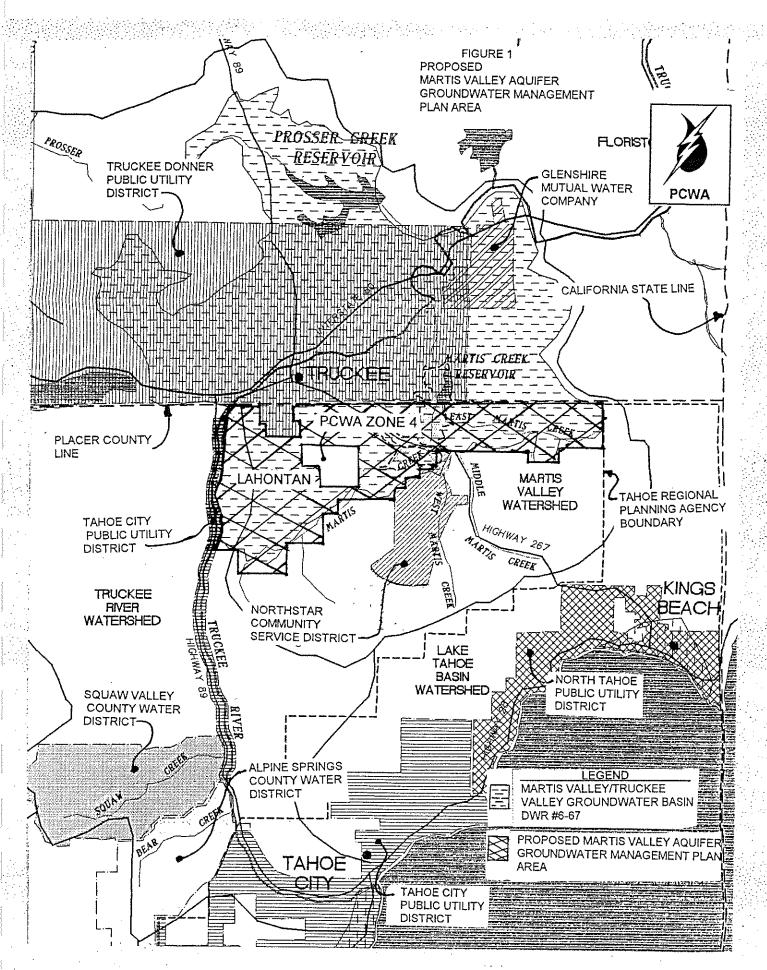
and is identical in territory to the County of Placer. The Water Agency is also designated as a local agency and an independent "special district" encompassing all of Placer County. The Water Agency is governed by an independently elected five-member Board of Directors with individual district boundaries identical to the Placer County Board of Supervisors.

On a County-wide basis, one of PCWA's Agency-wide services is the maintenance of a close liaison and collaboration with County of Placer officials. The Water Agency is actively involved on water resource issues and advises the County of Placer on actions necessary in order that Placer County's water will be available for present and future beneficial uses in this County. The Water Agency's involvement is in an overview capacity to look ahead for ways of matching Placer County's resources to Placer County's ultimate water demands. These demands are linked to the ultimate land use needs, adopted General Plans, and economic development plans of the County and six incorporated cities in Placer County.

### **Groundwater Management Plan Area**

The California Department of Water Resources (DWR) periodically issues Bulletin 118, entitled "Ground Water Basins in California" which identifies the state-designated groundwater basins throughout California. In Bulletin 118-80, the Martis Valley (Truckee Valley) groundwater basin is designated as Basin Number 6-67 within the North Lahontan Hydrologic Study Area. This groundwater basin underlies portions of eastern Placer, Nevada, and Sierra Counties.

The Martis Valley Groundwater Management Plan area is shown on Figure 1. The boundary line of the plan area tends to follow the Martis Valley groundwater basin boundary in the unincorporated area of east Placer County. The Plan area consists of property generally including that portion of Martis Valley within east Placer County, lying southerly of the Placer/Nevada County line except the area lying within the Truckee Donner Public Utility District, lying easterly of the Tahoe City Public Utility District along the Truckee River, lying westerly of T17N, R17E, Section 24, and lying northerly of those USGS map sections bordering the aquifer perimeter and the Northstar Community Services District. A licensed surveyor's description of the plan area is provided in the Appendix.



### **Truckee River Operating Agreement**

The 1990 passage of the federal law PL 101-618, the Truckee-Carson-Pyramid Lake Water Settlement Act (Act), provided for the interstate allocation of water resources in the Truckee River Basin. The Truckee River has its headwaters in the California's high Sierras above Lake Tahoe and ultimately flows into a desert lake in the state of Nevada. The Act requires that additional measures be taken, including the negotiation of a new operating agreement commonly called the Truckee River Operating Agreement (TROA) prior to the full implementation of the Act's provisions. The Act requires the Federal Government, California, Nevada, and the Pyramid Lake Paiute Tribe, and the Sierra Pacific Power Company to be signatories to TROA; however, others may also elect to be a party to the agreement.

The Act has special provisions relevant to the water resource allocation to the Truckee River Basin in California and are discussed below. This basin, which is located the eastern portions of Placer, Nevada, and Sierra Counties, has been allocated the right to divert or extract surface and groundwater up to 32,000 acre-feet per year. However, the maximum annual diversion of surface water is limited to 10,000 acre-feet. California is required to publish an annual report on water use to determine compliance with the terms and conditions of the interstate allocation.

All new wells drilled after the Act was enacted must be designed to minimize any short-term reductions of surface streamflows to the maximum extent feasible. The Act does not define "short-term reduction" and leaves that task to others. The draft TROA establishes wells drilled or under construction before May 1, 1996, domestic wells, and special zones wherein wells located in compliance with a specified criteria are deemed to be in compliance with the Act. The following is the draft well criteria for the special zone in Placer County that includes the Plan area: any well located (1) more than 500 feet from the centerline of the Truckee River, and (2) more than 200 feet from the centerline of any perennial stream or spring, and (3) more than 50 feet from the ordinary high line of any lake located on an intermittent stream. All rivers, streams and springs will need to be located on a map and agreed to by California. The Martis Creek Lake National Recreation Area is not included within this special zone.

The Act allows for the extraction of groundwater from the Truckee River Basin in California for use in the state of Nevada. Use in Nevada is subordinate to any use in California and must cease to the extent that it causes extraction to exceed the safe yield of a basin. The Act implicitly recognizes that local jurisdictions in California can

determine the safe yield under California law. However, the Act authorizes the United States Geological Survey (USGS) to determine the safe yield of an aquifer in the Truckee River Basin in California in accordance with California law. The intent of this authorization appears to be that of empowering the USGS to be a mediator if safe yield becomes a issue in Nevada's use of California groundwater.

The TROA is currently being negotiated by the principal signatories and others. Local interest groups within the Truckee River Basin in California have formed an ad-hoc group called the Truckee River Basin Water Group to provide the California negotiating team input from the local perspective. The Placer County Water Agency, Northstar Community Services District, Squaw Valley Public Service District, Alpine Springs County Water District, Tahoe City Public Utility District, and the Truckee Donner Public Utility District, are working in a collaborative fashion in representing the water community interests in these negotiations.

The draft TROA document and associated EIS/EIR was released in March 1998 for a 90 day public review period. The current schedule indicates that the implementation of TROA could begin in early 1999. It is possible that any legal challenge raised during the EIR/EIS process may delay TROA implementation.

### Governance as Related to Water Use in Martis Valley

There are a number of jurisdictions in the Placer portion of Martis Valley that are involved in water resource management. The County of Placer established County Service Area (CSA) number 28 which encompasses all the unincorporated area in the County which includes most of Martis Valley. The Water Agency has a service boundary covering the entire County and has established PCWA Zone No.4 in Martis Valley. PCWA Zone No.4 currently consists of the Lahontan Subdivision. The U.S. Corps of Engineers oversees the Martis Creek Lake and Reservoir that is contained within the Martis Creek Lake National Recreation Area. The Northstar Community Services District overlies the southern edge of the aquifer.

In Nevada County, the Truckee Donner Public Utility District (TDPUD), Glenshire Mutual Water Company, and the Donner Lake Water Company operate within the Martis Valley Basin. To date, TDPUD is the only local agency in the Martis Valley Basin that has adopted an AB3030 type groundwater management plan. TDPUD is currently implementing the first phase of its GMP which consists of a groundwater monitoring plan to track groundwater elevations and the development of a groundwater usage

database. The TDPUD GMP appears to consider the entire Martis Groundwater Basin in both Nevada and Placer County. The Water Agency applauds the District's effort in taking a regional approach to groundwater management. However, TDPUD does not have the necessary authority to implement its GMP in the Placer portion of Martis Valley. As required by Water Code Section 10750.7, the District can only manage groundwater pursuant to AB3030 within the service area of another local agency (i.e. County of Placer or the Water Agency) with the agreement of that party. The Water Agency is not aware of any such agreements but is interested in coordinating its groundwater management effort with TDPUD.

### **PCWA Preliminary Study**

A preliminary study was conducted by the Agency in 1996, the results of which were used by the Agency Board of Directors to authorize staff to develop a GMP for Martis Valley. The findings of the preliminary study identified that it was in the best interests of the Agency and the lands and inhabitants in Placer County overlying the Martis Valley aquifer for the Water Agency to develop a AB3030 type GMP for the long term management of the groundwater resources in order to protect the availability of this resource for continued use in future years.

The Placer County Board of Supervisors and a major landowner in the valley were amongst those that have indicated support for the Agency's development of a GMP. Some of the local water purveyors questioned the Agency's timing given the TROA negotiations and the Placer LAFCo study on services being provided in the Martis Valley. The Agency Directors were given assurance that the Agency's proceeding with the development of a GMP was consistent with the intent of the LAFCo study, the intent of PL101-618, the TROA negotiations, and was supported by the principal negotiators of TROA, namely the Federal Government, the State of Nevada, and the State of California. The Board of Directors of the Placer County Water Agency adopted Resolution 96-43 on November 7, 1996, declaring its intention to prepare a GMP for the Placer County Water Agency groundwater management area of Martis Valley.

On a parallel track in 1996, a Martis Valley Study was completed under the direction of the Placer County LAFCo per a request from the Placer County Board of Supervisors. The study outlined the existing service needs and available service providers, the evolution of the existing service patterns, and analyzed potential alternatives for service. This study recommended, relevant to water resource management, that the Placer County Water Agency and the Truckee Donner Public Utility District work jointly

to prepare a comprehensive groundwater management plan for the Martis Valley aguifer.

### B. GMP COMPONENTS

### B.1 MONITOR GROUNDWATER LEVELS AND QUALITY, AND EVALUATE SAFE YIELD

### **Land Use Trends**

The Martis Valley General Plan was originally adopted by the Placer County Board of Supervisors in 1974. This plan envisioned a holding capacity of 25,262. Until very recently, the Martis Valley has been for the most part undeveloped with little or no existing infrastructure. In 1994 the population was estimated to be approximately 1,000. The Lahontan Subdivision, a 480 home and golf course project, began construction in 1996 and represents the first major new development in the Placer portion of the valley. The Water Agency is providing the domestic water service to this project.

In 1997 Placer County began the process to prepare an update to the Martis Valley General Plan. On August 19,1997, the Board of Supervisors created the Martis Valley Community Plan - Citizen's Committee in which the Water Agency and other jurisdictions in the region, major land owners, and select individuals will be represented. The role of this committee is to help County staff prepare the draft community plan update relevant to implementation programs and public services.

The authority to make land use decisions in the unincorporated portions of the county, including Martis Valley, is vested in the Placer County Board of Supervisors. The Plan recognizes that fact and assumes that the Board of Supervisors will continue to exercise this authority. The Water Agency does not intend to be afforded special land use planning review status as could be interpreted by the implementation of GMP component (I) as listed in Water Code Section 10753.7. The goal of the Plan is to manage the groundwater resource in Martis Valley for the benefit of the current population and for the future economic development needs in Placer County and to collaborate with the jurisdictions in both Placer and Nevada County which share the use of the common aquifer.

### **Surface Water Availability**

The Truckee River, shared between California and Nevada, has had a long history of water rights disputes. These disputes include various parties filing protests against water right applications and petitions for change in place of use or point of diversion that were under consideration by the California State Water Resources Control Board. As a result of these protests, the SWRCB has not issued a new or a changed water right for the diversion of surface water in the Truckee River watershed since 1972. This situation could change once TROA is signed because the signatories are required to be dismiss their protests as a precondition of TROA.

The SWRCB has estimated that the existing diversions of surface water from the Truckee River Basin for use in California are somewhere between 2,500 and 4,000 acre-feet annually. SWRCB staff has qualified this estimate in noting that there are over 100 water rights of record in the Basin with a paper water right value in excess of 10,000 acre-feet. Their estimate reflects the 13 largest diverters, which hold over 95% of the total water rights, and is adjusted for various unknowns such as existing pre-1914/post-1914 appropriative rights. The SWRCB will be refining this estimate once TROA is implemented. Approval of TROA will make available approximately 6,000 to 7,500 acre-feet of new surface water diversions in the Truckee River Basin.

### **Groundwater Needs and Availability**

The TDPUD report entitled "Ground-Water Management Plan, Phase 1, Martis Valley Ground-Water Basin," dated January 31,1995, contains a rigorous hydrogeologic analysis of the Martis Valley Basin that was conducted in the 1970s. The highlights of that work is briefly summarized here. The surface area of the groundwater basin is about 37,600 acres. Approximately 20% of the Martis Valley aquifer footprint lies within Placer County while 80% of the aquifer lies within Nevada County. The aquifer is essentially isolated with negligible inter basin transfer occurring. The principal surface water drainage within the basin is the Truckee River.

Groundwater recharge occurs in the areas of high elevation and flows down gradient towards the discharge points, namely the Truckee River, Prosser Creek, and Prosser Reservoir. The TDPUD report notes that the groundwater levels in wells adjacent to the Truckee River were higher than the elevation of the Truckee River which indicates that the river is currently a gaining stream within the Martis Valley groundwater basin. Direct

groundwater recharge to the basin is estimated to be about 18,000 acre-feet. Approximately 13,700 acre-feet of groundwater is discharged out of the basin. The total groundwater in storage within the basin is estimated at approximately 1,050,000 acre-feet. The potential for this aquifer to provide a water supply potential to the Placer portion of the aquifer is very good. The probable well yield for most of the valley floor on the Placer side is projected to exceed 1000 gallons per minute.

Table 1 summarizes the information from the TDPUD report regarding the holding capacity of this aquifer, the groundwater balance, and the recommended interim safe yield. The annual groundwater extractions from the Martis Valley Basin are estimated by TDPUD in 1995 to be approximately 7,900 acre-feet per year. The vast majority of these extractions occur in Nevada County. Over 200 wells have been identified in the entire Martis Valley Basin. There are only eight known wells within the Martis Valley GMP area: two wells developed in 1996 to supply the Lahontan Subdivision, one well owned by Northstar Community Services District, three residential wells, and two monitoring wells owned by DWR.

Table 1 Martis Valley Groundwater Basin Capacity				
Amount stored in the basin	1,050,000 acre-feet			
Recharge rate	18,000 acre-feet per year			
Groundwater returned to the Truckee River	5,000 acre-feet per year			
Interim safe yield	13,000 acre-feet per year			

Table 2 presents an estimate of the future groundwater use in the Martis Valley. The water purveyors have projected their future use of groundwater in support of the TROA negotiations and is reflected in this document. The PCWA Zone 4 demand represents the build out of the Lahontan Subdivision. The demand of the remaining unincorporated Martis Valley reflects the holding capacity of the Martis Valley General Plan, circa 1974, of 25,262 citizens minus the future PCWA Zone 4 and the Northstar CSD demand. This holding capacity of 25,252 is equivalent to an annual water demand of 5,200 acre-feet based upon a 2.59 people per equivalent dwelling unit (EDU) and a consumption rate of 500 gallons per day per EDU. Since the Martis Valley General Plan includes the population projected by both Northstar CSD (1800 AF from surface and groundwater sources) and PCWA Zone 4 (600 AF from groundwater sources), the net annual demand of the remaining unincorporated area is 2,800 AF.

The projected future use of Martis Valley groundwater appears to exceed the interim safe yield of the aquifer. If the above water demand and safe yield values prove correct, 8,250 AF/year in additional surface water supplies will be needed to satisfy the entire future water demand in Martis Valley. However, more work needs to be done to refine the water demand projections. Future land use decisions may also change the water demand projection. As an example, the County of Placer's updating the Martis Valley General Plan in the near future may result in a revision to the area's holding capacity and resultant water demand.

Table 2 ESTIMATED FUTURE USE OF MARTIS VALLEY GROUNDWATER					
Water Purveyor	Service Area	Future Groundwater Use			
PCWA - Zone 4	Placer County	600 AF/year			
Northstar CSD	Placer County	600 AF/year			
Build out of unincorporated Martis Valley per 1974 Plan	Placer County	2,800 AF/year			
Truckee Donner PUD	Nevada County	12,000 AF/year			
Glenshire Mutual Water Co.	Nevada County	1,200 AF/year			
Other industrial and domestic uses (TDPUD 1995 estimate)	Placer and Nevada County	4,050 AF/year			
Total proj	21,250 AF/year				
	13,000 AF/year				
Need for additional recharge	8,250 AF/year				

### Measurement of Water Use

Currently no state law or county ordinance requires that water use be measured in the Plan area. On the local level, the Placer County Water Agency is one of the water purveyors in Placer County that has established polices and regulations which require all customers connected to its domestic water system to be metered.

PL101-618 establishes a gross water diversion allocation for the Lake Tahoe Basin and the Truckee River Basin in California and requires California to publish an annual report of water use necessary to determine compliance with its allocation and other terms and conditions of the Act. A well serving an individual residence is not required by the Act to be metered since the Act establishes that "unmetered diversion or extraction of water by each residence shall, for the purposes of calculating the amount of California's gross

diversion, be presumed to use four-tenths of an acre foot per residence per year". The Act makes an important distinction between water used by a residence and by "commercial, irrigated agriculture". The Act stipulates that water used for commercial, irrigated agriculture in the Truckee River Basin in California shall not impair and shall be junior and subordinate to all beneficial uses in Nevada. Residences on parcels with greater than two acres under irrigation will be designated "commercial, irrigated agriculture". Commercial nurseries, irrigated golf courses and other recreational facilities are additional exceptions to that designation.

The draft TROA builds upon the Act relevant to water use and measurement in the Truckee Basin. The draft TROA requires water purveyors, public agencies and snowmaking operators to measure all water they divert from surface and groundwater. Also suppliers of domestic water with twenty five or more connections or who divert more than 10 acre-feet per year will need to measure their diversions. The draft TROA also stipulates that unmeasured non-residential use will be presumed to use the full water use specified in its State license or permit. In other cases, unmeasured water used for non-residential purposes are to be determined by procedures jointly developed by California and Nevada.

The Martis Valley Groundwater Management Plan area must comply with the terms and conditions of the Act and TROA once fully implemented. At that time, the amount of groundwater used in the Plan area will need to be measured as required by the conditions in the Act and TROA and reported to the State for use in their annual report. The reporting of 0.4 acre-feet per residence per year obviates the need to consider the placement of a water meter on a well serving an individual residence. Metering of non-residential use may be a consideration within the basin in the future. Metering has the potential of more accurately portraying water use compared to the alternative of a water use estimate developed by both states. Thus metering of this use category may allow for a more complete utilization of the Truckee River Basin allocation. The Water Agency does not intend to utilize the powers granted by AB3030 to require the metering of residential or non-residential uses that are not connected to a domestic water system.

### **Evaluate Groundwater Safe Yield**

The Water Agency intends to work collaboratively with TDPUD on reviewing the methodology and data used in their determination of the interim safe yield of the basin

and evaluating the need for any updating of their 1970s work. The advantages of additional field work and the possible use of computer modeling may be considered. This issue may not be of immediate importance given that there is considerable headroom between the current groundwater usage and TDPUD's interim safe yield. This could change if parties in the State of Nevada express an interest in using groundwater from the Truckee River Basin within California as conditionally authorized in PL101-618, Section 204. Interstate Allocation, subsection c.1.E. This subsection states that "any use within the State of Nevada of any Truckee River basin groundwater with a point of extraction within California shall be subordinate to existing and future uses in California, and any such uses of water in Nevada shall cease to the extent that it causes extractions to exceed safe yield."

### **Monitor Groundwater Levels and Quality**

Martis Valley groundwater surface levels and quality data is currently being acquired by the following agencies:

- Northstar Community Services District
- Truckee Donner Public Utility District
- Glenshire Mutual Water Company
- Tahoe-Truckee Sanitation Agency
- Donner Lake Water Company
- California Department of Water Resources, Central District

The Water Agency will make its staff and resources available to enhance this ongoing regional monitoring effort.

### B.2 COORDINATION WITH OTHERS IN THE MARTIS VALLEY

It is the intent of the California Legislature to encourage local agencies within the same groundwater basin, that are authorized to adopt AB3030 groundwater management plans, to adopt a coordinated groundwater management plan. The Water Agency intends to engage the local public and private water purveyors, Placer and Nevada County governments, the Town of Truckee, landowners, and the general public to realize the implementation of a coordinated GMP for the entire basin.

The Water Agency will also maintain a close working, albeit an informal, relationship with the state and federal regulatory agencies on water resource issues that affect Martis Valley and the eastern region of the County. Three examples highlight the need for Agency attention:

- The Agency will continue to work in a collaborative fashion with the California
  Department of Water Resources, local water purveyors, County of Placer, and other
  key stakeholders in the Truckee River basin in California in the Truckee River
  Operating Agreement negotiations and future implementation.
- 2. The Agency will continue to coordinate with DWR to ensure that the Placer surface and groundwater resource availability and water demand is accurately depicted in DWR Bulletin 160, the "California Water Plan Update".
- 3. With Congress passing the Safe Drinking Water Act Amendments of 1996, the Agency will be tracking, and commenting on as appropriate, the progress of the U.S. EPA and State Department of Health in their development of regulations of the Source Water (both surface and groundwater) Assessment Program.

The Water Agency plans make use of GIS mapping technology to display both surface and groundwater resource data and information pertaining to the Martis Valley. The US Forest Service and the County of Placer are currently developing this technology for this region. The integration of these two efforts will result in full coverage of the Plan area. At the appropriate time, the Water Agency will consider the addition of a water resource data layer to their GIS work.

### C. EXCLUDED PLAN COMPONENTS

The Water Code Section 10750 *et seq.* authorizes the inclusion of various components within an AB3030 type GMP. The following components have been excluded from the West Placer GMP at this time:

- The control of saline water intrusion
- Identification and management of wellhead protection areas and recharge areas
- Regulation of the migration of contaminated groundwater
- Mitigation of conditions of overdraft
- The administration of a well abandonment and well destruction program

- Replenishment of groundwater extracted by water producers
- Facilitating conjunctive use operations
- Identification of well construction policies
- The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling and extraction projects
- The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination

The Water Agency does not intend to the utilize the powers granted by AB3030 regarding the levying of assessments or fees based upon groundwater pumping. If such a need arises in the future, the Water Agency will involve all stakeholders on the issues and solution options and conduct a public hearing process prior to any consideration for Agency action.

### D. PLAN UPDATING

The Water Agency may periodically update this Plan as conditions and information warrant. Information obtained through the groundwater monitoring program is a factor which may require modification of this Plan. The Water Agency will conduct public workshops, meetings with individuals or groups where appropriate or requested, and conduct a public hearing process per Water Code 10750 *et seq.* prior to any consideration for Agency action.

### E. IMPLEMENTATION

Once the Plan is approved by the PCWA Board of Directors, the following work is will be initiated within the first six months:

Agency staff will schedule a meeting with Truckee Donner Public Utility
District to discuss the need and possible timing for the updating the District's
Martis Valley aquifer safe yield analysis. The level of additional funding
required to support the updating of this analysis will be determined at a future
time.

- Agency staff will work collaboratively with others in the valley in the monitoring the groundwater levels and water quality, and on the use of GIS to display water resource information.
- Agency staff will provide the support requested by the County regarding the Agency's participation in the Martis Valley Community Plan - Citizen's Committee.
- Agency staff will remain actively engaged in the TROA negotiations and implementation. Staff will continue participating in those issues that involve water resource allocation, surface water storage, design criteria of new wells, maintenance of instream flows, and others that are germane to the economic development of Placer County.

### F. RECOMMENDATIONS

The following recommendations are provided to the PCWA Board of Directors for consideration:

- Conduct a noticed public hearing to consider a resolution to adopt this Groundwater Management Plan for Martis Valley.
- Approve implementation of the Martis Valley GMP which consists of the following components:
  - 1. monitoring of groundwater levels and groundwater quality,
  - 2. evaluating the need to refine the existing determination of the interim safe yield of the basin,
  - maximizing groundwater management coordination within the Martis Valley Basin in Placer and Nevada Counties, and
- Instruct staff to continue representing the Agency's interests and the water resource interests of Placer County in the Truckee River Operating Agreement negotiations and future implementation.

### G. REFERENCES

- 1. California Department of Water Resources, 1991, Truckee River Atlas
- 2. California Department of Water Resources, 1980, Ground Water Basins in California, Bulletin No.118-80
- 3. Assembly Bill No. 3030, 1992, Part 2.75, Section 10750 of Division 6 of the California Water Code
- 4. California Water Code, 1957, Chapter 81, Placer County Water Agency Act
- 5. Placer County, 1974, Martis Valley General Plan
- 6. Placer County, 1994, Placer County General Plan Update
- 7. Placer County Local Agency Formation Commission, 1996, Martis Basin Study
- 8. Federal Law PL101-618, 1990, The Truckee-Carson-Pyramid Lake Water Settlement Act
- 9. Draft Truckee River Operating Agreement, February 1998, draft TROA accompanying the TROA draft Environmental Impact Statement / Environmental Impact Report
- 10. Hydro Search Inc., 1995, Ground-Water Management Plan, Phase 1, Martis Valley Ground-Water Basin, Basin No. 6 -67, Nevada and Placer Counties, California. Prepared for the Truckee-Donner Public Utility District.
- 11. Personal communications with John Kramer, legal counsel with California Department of Water Resources, California TROA negotiating team, 1996 through 1998.
- 12.Personal communications with Roger Johnson, Water Rights Division, California State Water Resources Control Board, California TROA negotiating team, 1996 through 1998.

13. Personal communication with Ms. Bertha Woolverton, landowner in Martis Valley, March 2, 1998, which indicates that she has received a copy of the draft GMP and is supportive of the Agency adopting the Plan.

### H. APPENDICES

- 1. Resolution No. 96-43 of the Board of Directors of the Placer County Water Agency declaring the intention to prepare a Groundwater Management Plan for the Placer County Water Agency Groundwater Management Area Martis Valley, dated November 7, 1996.
- 2. Licensed Surveyor's description of the Martis Valley Groundwater Management Plan area, dated November 15,1997.
- 3. Resolution No.98-40 of the Board of Directors of the Placer County Water Agency adopting a groundwater management plan for Martis Valley, dated October 6, 1998.